DocuColor Color Server

ADMINISTRATOR GUIDE

for the Xerox 5750 digital copier printer

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Introduction

This manual is intended for anyone who is responsible for integrating the DocuColor Color Server™ into a business environment that includes networked personal computers. After the DocuColor and client workstations are set up, as described in this guide and in *Getting Started*, individual users can print to the color server as a high-performance color PostScript printer.

This manual includes guidelines on the following topics:

- Basic configuration of the DocuColor to support printing over TCP/IP and IPX (Novell) networks
- Setting up a parallel port connection
- Configuring UNIX systems and Novell and Windows NT servers to provide DocuColor printing services
- Administering network printing
- Using the DocuColor in mixed network environments
- Setting up a Token Ring connection

NOTE: The network guidelines in this book are not intended to replace the services of an experienced network engineer.

Network administration features

DocuColor software offers several important features that affect you as a network or printer administrator:

- **Direct (native) support of NDS with NetWare 4.x**

  NetWare 4.x can also be supported in bindery emulation.

  NOTE: NDS is an abbreviation for either Novell Directory Services or NetWare Directory Services. The two names are used interchangeably.

- **Simultaneous NetWare 4.x and NetWare 3.12 connections supported**

  One NetWare 4.x NDS server and up to eight NetWare 3.12 bindery servers (or NetWare 4.x servers in bindery emulation mode) can be connected to the DocuColor.

- **Remote utilities (Spooler and Downloader) for Windows™ computers**

  The utilities can be run from a Windows 95 workstation running IPX/SPX or from a Windows NT 4.0 Workstations or Windows NT 4.0 Server running TCP/IP protocols.

- **WebTools (WebSpooler and Installer)**

  The WebTools allow you to manage the DocuColor from the Internet or from your company's intranet. To use the WebTools, you need to set certain options in Network Setup and Printer Setup.

- **Color calibration**

  AutoCal™ is a copier-based calibration option that doesn't require a densitometer. Two calibration targets are provided. For more information on calibration, see the *User Guide*.

- **Support for Windows (WINS) printing**

  Windows printing, also known as WINS printing, allows you to print using built-in Microsoft networking support without additional network software. Printing by this method allows you to print from your computer to a particular queue (Print or Direct) on the DocuColor.

About the documentation

This guide is part of the set of documentation that includes the following manuals for users and system administrators:

- The *Administrator Guide* explains basic configuration and administration of the DocuColor for the supported platforms and network environments. It includes guidelines for setting up UNIX, Windows NT, and NetWare servers to provide PostScript printing services to clients.
- *Getting Started* describes how to install software to enable users to print to the DocuColor. Specifically, it describes installation of PostScript™ printer drivers, printer description files, and other user software provided on the DocuColor User Software CD. It also explains how to connect each user to the network.
- The *User Guide* describes the printing features of the DocuColor for users who send jobs via remote workstations on the network or via a direct parallel port connection. It also describes the WebTools, the Spooler, and the Downloader, and lists the printer fonts installed on the DocuColor.

- *Release Notes* provides last-minute product information and workarounds for some of the problems you may encounter.

About this manual

You'll find the following information in this manual:

- Chapter 1 illustrates the supported network configurations and shows the network connectors on the DocuColor.
- Chapter 2 describes configuring the DocuColor from its Control Panel.
- Chapter 3 offers guidelines for setting up Windows network servers and UNIX systems for printing to the DocuColor.
- Chapter 4 summarizes some administrative features of DocuColor software that are available for the three major platforms, and offers some troubleshooting hints.
- Appendix A describes the Token Ring option.

Administrator features described in other manuals are summarized on page 4-1.

Conventions used in DocuColor manuals

Actions you should perform are shown as numbered steps in bold-faced type, followed by a brief explanation if needed. For example:

1. **Choose Options in the Print dialog box.**

Special options for your printer are available if you have installed the PostScript Level 2 driver and the PPD for your printer.

A special font indicates text you should type or keys you should press. For example:

<Tab> indicates that you should press the Tab key.

- **At the NetWare 4.x drive prompt, type:**

rconsole

The special font is also used to highlight options that appear in DocuColor setup menus. For example:

This option appears only if Enable Parallel Port is set to Yes.

The initial letters of menu options and Control Panel setups are uppercase. Filenames and settings are listed in the special font only if it is hard to distinguish them from surrounding text.

Occasionally you will be referred to other DocuColor manuals, whose titles will be shown in italics. For example, see *Getting Started*.

Chapter 1: Connecting to the Network

This chapter summarizes the stages in setting up a DocuColor, and includes diagrams that refer you to other chapters or other manuals for completing your installation. If you check those references, you should be able to find the information you need quickly.

DocuColor on the network

When the DocuColor is connected to a network, it behaves as a networked PostScript printer. The built-in Ethernet interface on the DocuColor supports the following network protocols:

- TCP/IP (the lpd, nbt, and http protocols)

  TCP/IP stands for Transmission Control Protocol/Internet Protocol. The lpd protocol is the standard TCP/IP printing protocol. The nbt protocol supports Windows (WINS) printing. The http protocol is the protocol used for connection to the Internet.

- IPX/SPX (Novell)

  IPX/SPX stands for Internetwork Packet Exchange/Sequenced Packet Exchange.

These protocols (rules that enable computers on a network to communicate with each other) are supported on the Windows, and UNIX platforms and can run concurrently on the same Ethernet cable. Workstations that use other protocols can print through a server that uses one of the protocols mentioned, or they can print to the DocuColor parallel port. A Token Ring option is also available. This option supports the TCP/IP and IPX protocols. The DocuColor is auto-sensing, and can handle all of these connections simultaneously.

When you add a DocuColor to a network, it is assumed that a network administrator will have already installed a network cabling system and connected workstations and servers.

Stages of installation on the network

Installation can be performed by a network or printing administrator. The stages of a successful installation are:

- **Physically connecting the DocuColor to a functioning network**

  Prepare a network node for the DocuColor—obtain cable and route it to the location where the DocuColor will be installed (near the copier), and attach the cable to the network interface of the DocuColor. See page 1-11 for details.

- **Configuring the network server**

  When network servers are required, you need to configure those servers to provide client access to the DocuColor as a color PostScript printer. See Chapter 3 for configuring network servers in Windows and UNIX network environments.

- **DocuColor Setup**

  Configure the DocuColor for your particular printing and network environment. See Chapter 2 for details.

- **Client setup**

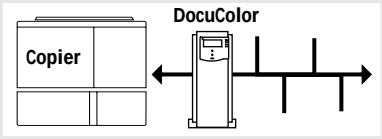
  Install the files needed for printing, install additional user software, and connect the client to the DocuColor over the network. These steps are described in *Getting Started*, and some information is provided in Chapter 3 of this manual.

- **System administration**

  Monitor and maintain system performance and troubleshoot problems that arise. See Chapter 4 for details.

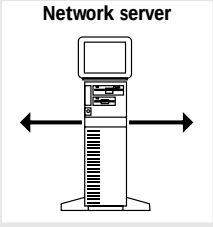
Summary of DocuColor network installation

CONNECTION



Prepare a network node. Connect the DocuColor to the copier and to the network.

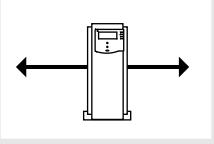
SERVER CONFIGURATION



Configure UNIX, Windows NT and IPX (Novell) servers to specify DocuColor print queues and DocuColor users.

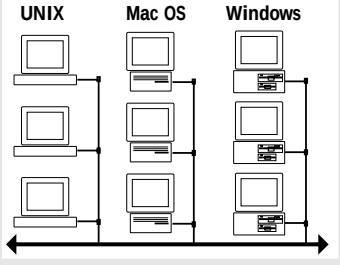
Install PostScript printer drivers and remote utilities on the server.

COLOR SERVER SETUP



In the DocuColor Control Panel, configure Server Setup, Network Setup, Printer Setup, PS Setup, Color Setup, and Job Log Setup. Perform AutoCal calibration.

CLIENT SETUP



At each workstation that will print to the DocuColor:

- Install the appropriate printer drivers and printer description files (PPDs), and connect to one or more queues.
- For computers that will use them, install the remote utilities and an Internet browser.
- Verify the DocuColor in the list of printers and run a test print.

DocuColor available on the network

Quick path to installation

The diagrams in the following pages show typical systems that can be used for printing and for using the DocuColor utilities. To use the diagrams, find the page with your preferred platform and network type. Then look up the setup procedures in the pages and books referred to in the keys.

The diagrams describe devices that use the supported networking protocols. They are logical diagrams and are not intended to describe the physical arrangement (topology) of devices on the network. A variety of physical arrangements is possible with each logical arrangement. For example, twisted pair Ethernet networks commonly use a star configuration around a hub, rather than a bus arrangement. The design of physical networks is beyond the scope of this manual.

If the network uses more than one protocol or more than one type of workstation, combine the setups listed for each component of your system. Note that multiple protocols (shown in the diagrams as parallel lines) can run on the same cable. A solid connection from the DocuColor with an arrow indicates that other supported network types can be operational at the same time.

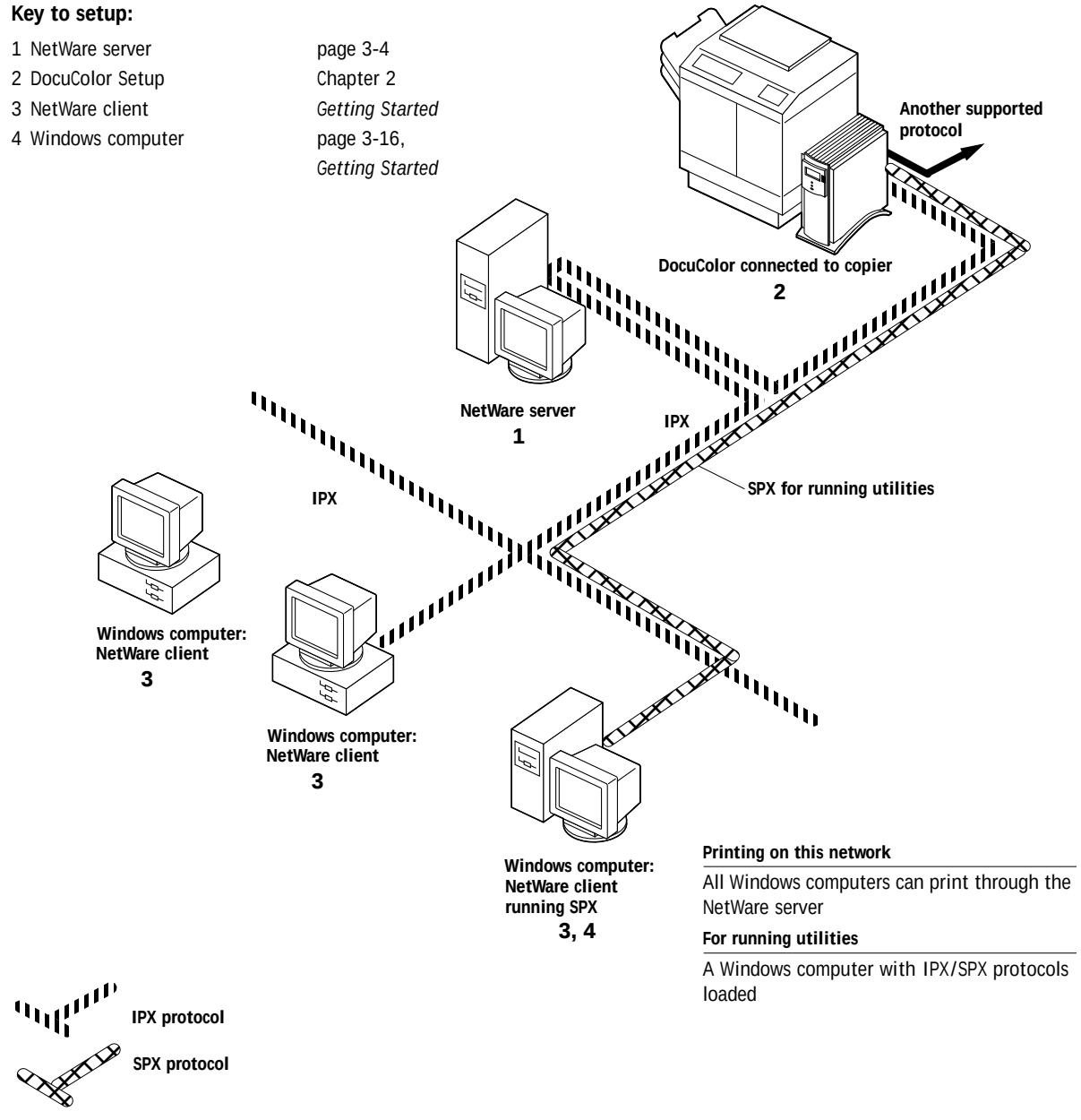
NOTE: The networking functionality outlined in this section is available on both Ethernet and Token Ring networks. A Token Ring card is required for connection to a Token Ring network. Token Ring drivers are included with DocuColor system software. See Appendix A for details.

The protocols used in these diagrams are indicated as follows:

Windows computers in a Novell environment

Key to setup:

1 NetWare server	page 3-4
2 DocuColor Setup	Chapter 2 *Getting Started*
3 NetWare client	page 3-16, *Getting Started*
4 Windows computer	



Printing on this network

All Windows computers can print through the NetWare server

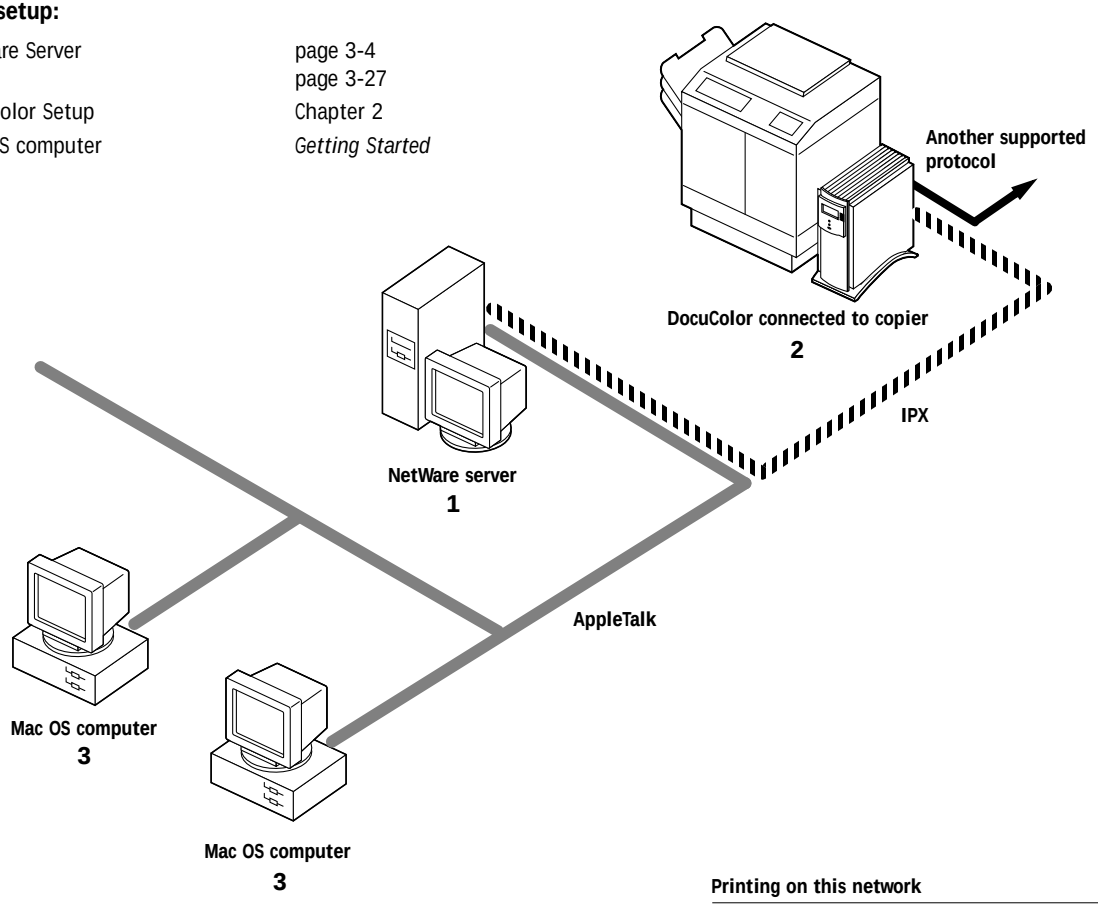
For running utilities

A Windows computer with IPX/SPX protocols loaded

Mac OS computers in a Novell environment

Key to setup:

1 NetWare Server	page 3-4 page 3-27
2 DocuColor Setup	Chapter 2
3 Mac OS computer	*Getting Started*

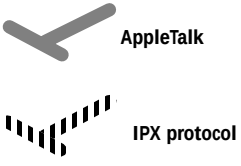


Printing on this network

Mac OS clients computers can print through the NetWare server using the AppleTalk protocol; the NetWare server sends jobs to the DocuColor using the IPX protocol

For running utilities

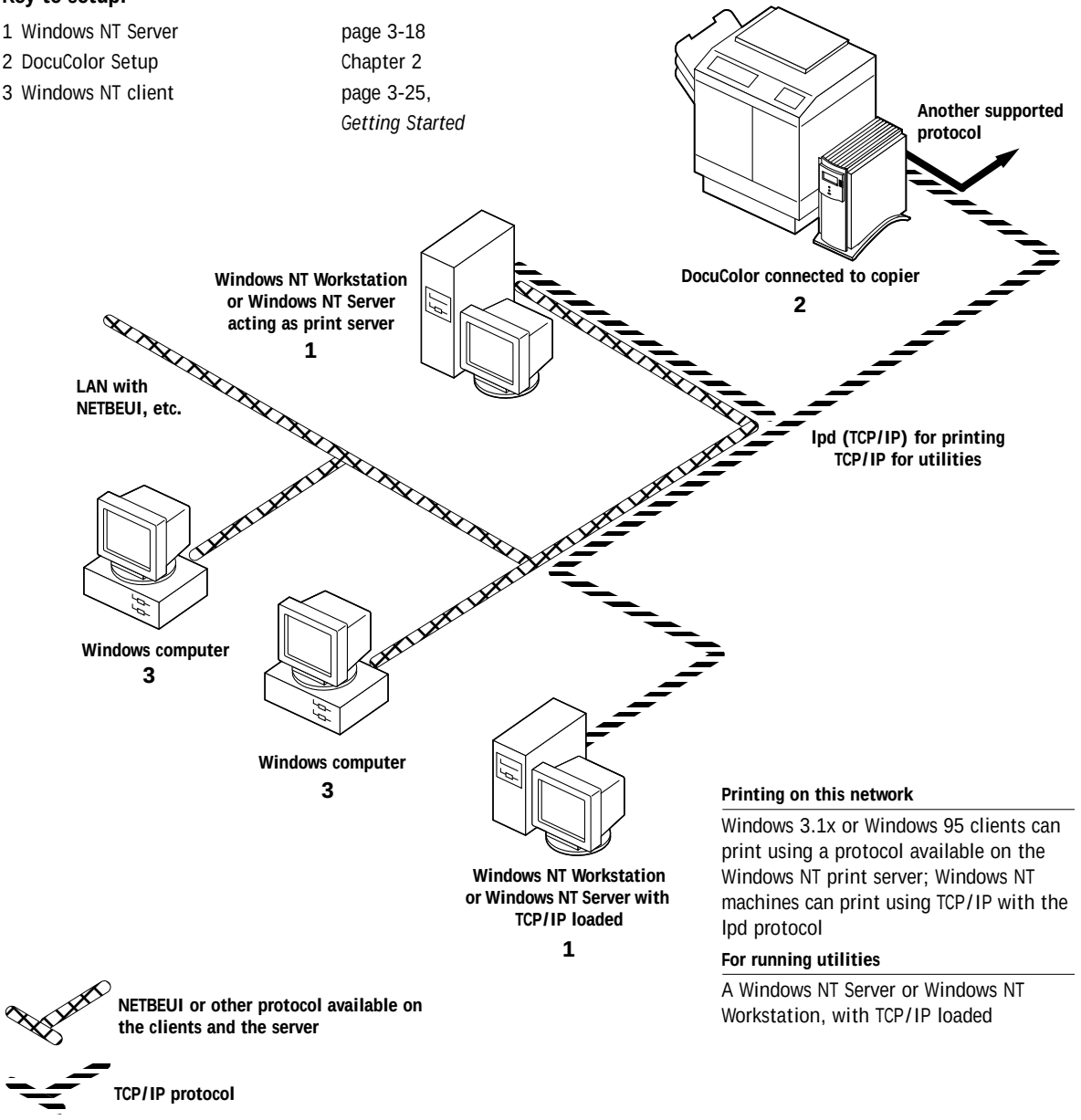
Remote utilities are not available on Mac OS workstations.



Windows NT Server environment

Key to setup:

1 Windows NT Server	page 3-18
2 DocuColor Setup	Chapter 2
3 Windows NT client	page 3-25, *Getting Started*



Printing on this network

Windows 3.1x or Windows 95 clients can print using a protocol available on the Windows NT print server; Windows NT machines can print using TCP/IP with the lpd protocol

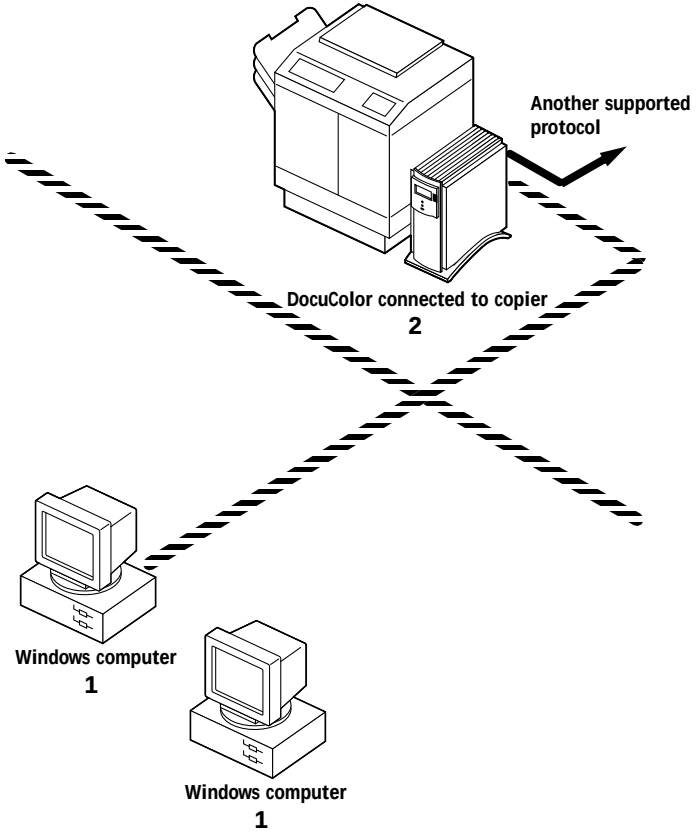
For running utilities

A Windows NT Server or Windows NT Workstation, with TCP/IP loaded

Windows computers using Windows (nbt) printing

Key to setup:

1 Windows computer	*Setup Guide*
2 DocuColor Setup	Chapter 2



For Windows printing

Windows computers

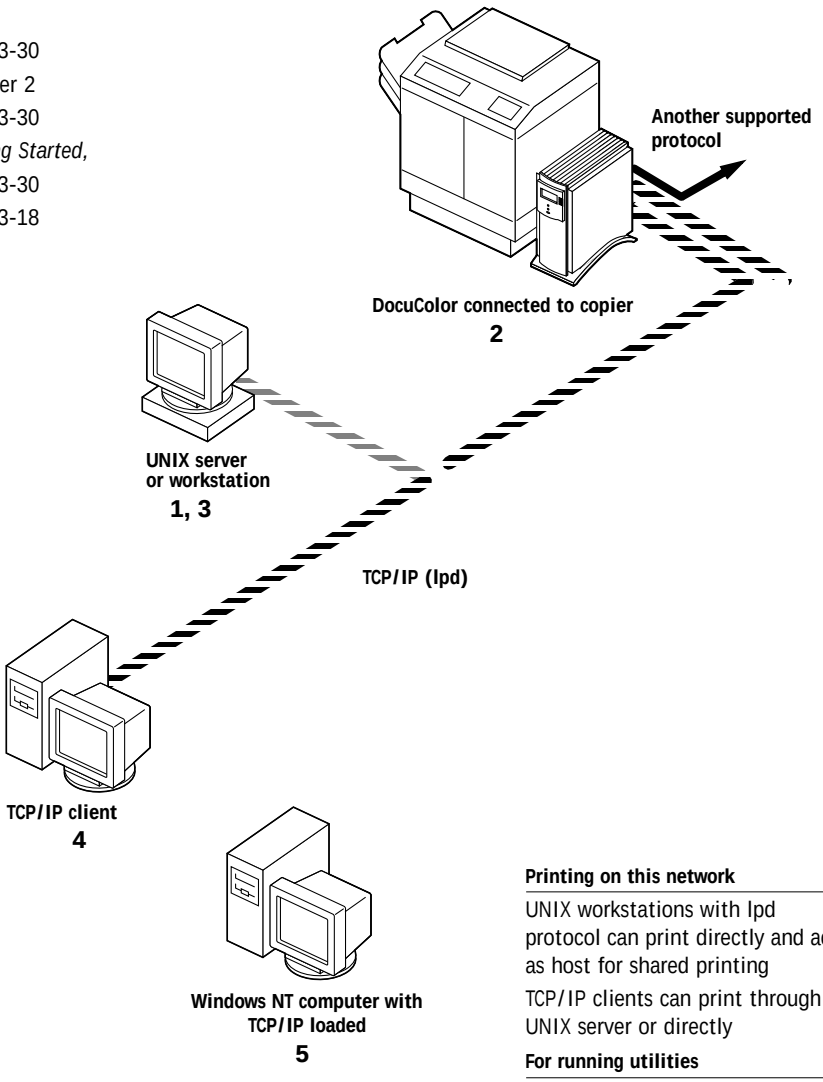
WINS printing enabled

TCP/IP (nbt) protocol

UNIX workstations and Windows NT computers on a TCP/IP network

Key to setup:

1 UNIX server/host	page 3-30
2 DocuColor Setup	Chapter 2
3 UNIX workstation	page 3-30
4 TCP/IP client	*Getting Started*, page 3-30
5 Windows NT client	page 3-18



Printing on this network

UNIX workstations with lpd protocol can print directly and act as host for shared printing

TCP/IP clients can print through UNIX server or directly

For running utilities

Requires Windows NT computer with TCP/IP and lpd loaded

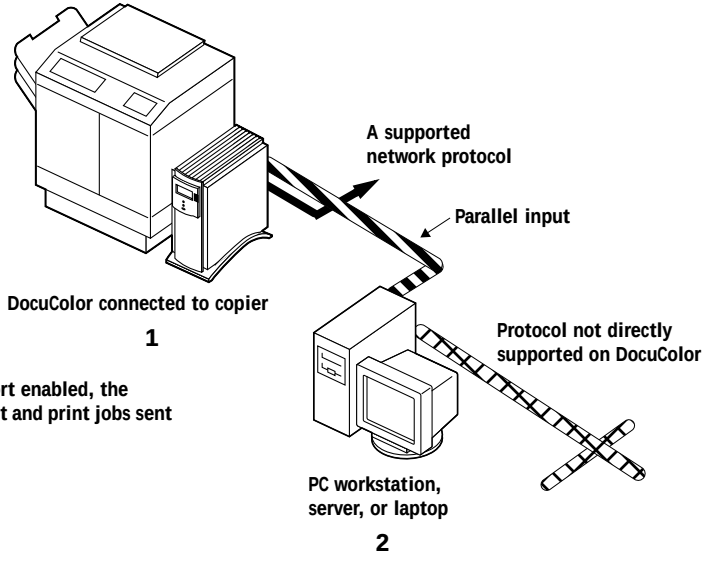
Remote utilities are not available on UNIX workstations

TCP/IP (lpd) protocol

DocuColor parallel port connection

Key to setup:

1 DocuColor Setup — Chapter 2
2 Windows computer — *User Guide*



The rest of this chapter and the next cover the parts of a installation that are performed on the DocuColor itself. This chapter describes the physical network connections; Chapter 2 summarizes DocuColor Setup and other administrative functions available from the Control Panel.

1

Before you begin

The following steps should be completed before you configure the DocuColor and the workstations that will print to the DocuColor. A service technician will have performed some initial installation.

TO PREPARE FOR DOCUCOLOR INSTALLATION:

1. **Print a copier test page to make sure the copier is functioning normally.**
2. **Turn off the copier and connect the interface cable from the copier to the DocuColor.**

   While the DocuColor is turned off, verify that the SCSI terminator is installed on the SCSI connector on the back of the DocuColor.
3. **To confirm this connection, turn on the copier and the DocuColor and print a Test Page from the Control Panel.**

   To print a Test Page, press the Menu button on the Control Panel to display the Functions menu. (See “DocuColor Control Panel” on page 2-3.) Choose Print Pages, and then Test Page.
4. **With both the copier and the DocuColor turned off, connect the network cable to the DocuColor, as described in the next section.**

   The network should already be installed and operational.
5. **Turn on the copier and then the DocuColor.**
6. **Prepare network servers to share DocuColor user software and to enable networked users to print to the DocuColor, and proceed to Setup.**

   See Chapters 2 and 3 for details.

Ethernet cable connection

The DocuColor supports Ethernet cabling of three types:

- Thinnet (thin coaxial Ethernet cable or 10Base 2)

  Uses an external transceiver to attach to the AUI (attachment unit interface) connector on the Ethernet interface of the DocuColor.

- Thicknet (thick coaxial Ethernet cable or 10Base 5)

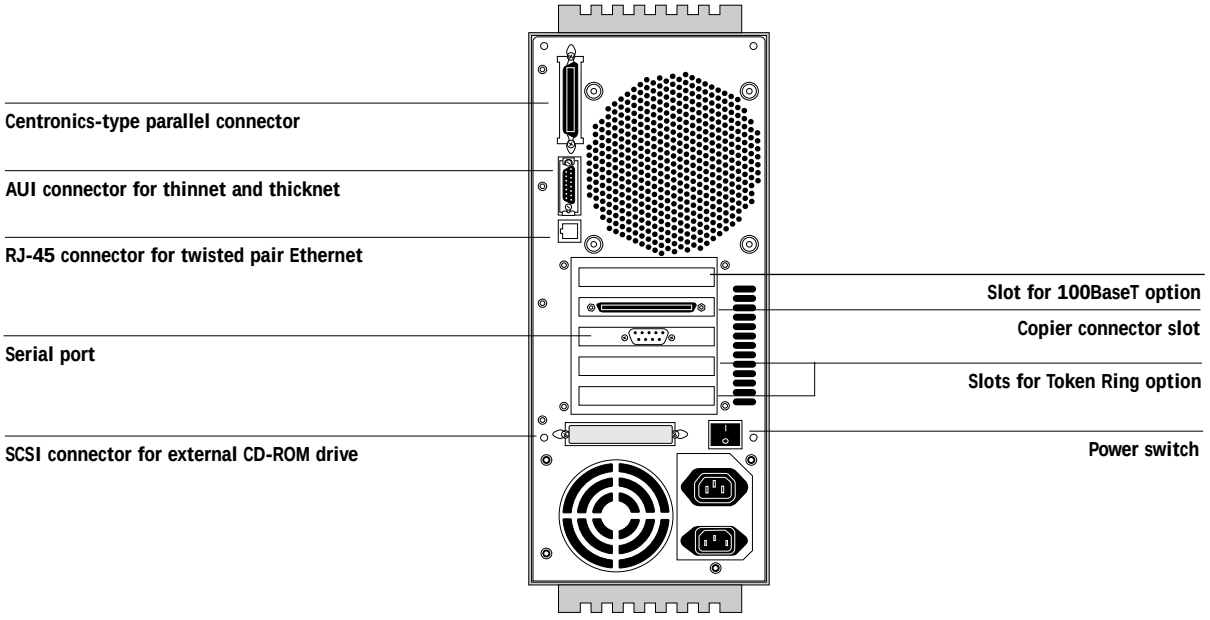
  Connects directly to the AUI connector on the Ethernet interface of the DocuColor.

- Unshielded Twisted Pair (UTP), defined as Category 5 (10BaseT or 100BaseT)

  Uses an 8-pin RJ-45 connector that plugs into the RJ-45 socket on the DocuColor.

NOTE: The DocuColor 100BaseT option is of type 100BaseTX, also known as Fast Ethernet. If an Ethernet hub is used, it must be a 100BaseTX hub. Only Category 5 Unshielded Twisted Pair (UTP) cabling can be used with 100BaseTX. The term “100BaseT” is used in this manual to refer to 100BaseTX.

Back view of the DocuColor



Shut down the DocuColor before connecting it to any network device.

NOTE: Do not attach the cable to more than one Ethernet connector on the DocuColor at one time.

If the Token Ring option is installed, you can attach an unshielded twisted pair cable to the RJ-45 connector on the Token Ring board and attach a second cable to the RJ-45 Ethernet connector. For more information on Token Ring, see Appendix A.

TO USE THINNET CABLE:

1. **With the DocuColor turned off, connect the transceiver to the AUI connector on the back of the DocuColor. Press down on the latch to lock the transceiver connection.**
2. **Connect the thinnet cable to the BNC connector on the transceiver.**
3. **Configure network servers for printing and then proceed to Setup.**

TO USE THICKNET CABLE:

1. **With the DocuColor turned off, connect the thicknet cable connector to the AUI connector on the back of the DocuColor. Press down on the latch to lock the connector.**
2. **Configure network servers for printing and then proceed to Setup.**

TO USE UNSHIELDED TWISTED PAIR CABLE:

1. **With the DocuColor turned off, connect the RJ-45 cable connector to the RJ-45 socket on the back of the DocuColor.**
2. **Configure network servers for printing and then proceed to Setup.**

Parallel cable connection

In addition to receiving print jobs over Ethernet and Token Ring, the DocuColor can accept print jobs from a Windows computer through its high-speed parallel port. This connection is advantageous for portable computers and for workstations that use dedicated networks using protocols other than TCP/IP or IPX.

The parallel port connection is active at the same time as the network ports.

TO USE PARALLEL CABLE:

1. **With the DocuColor and the Windows computer or server turned off, attach the Centronics-type parallel cable to the parallel port of the DocuColor.**

   The parallel port is the top connector on the back of the DocuColor.
2. **Connect the other end of the cable to the parallel port on the Windows computer.**
3. **Turn on the computer and the DocuColor.**
4. **Proceed to Setup.**

   To print to the parallel port, you will need to set up the parallel port connection. See “Parallel Port Setup options” on page 2-13. For information on setting up printing, see *Getting Started*; for printing to the parallel port, see the *User Guide*.

Chapter 2: Setting up the DocuColor

The DocuColor Color Server fits into a variety of work environments. To prepare for printing at your site, you need to do some initial configuration to specify the network environment and the kind of printing you will do.

About DocuColor Setup

When the DocuColor is powered on after new system software is loaded, you (or the service technician who loads the software) choose the language you want to use for Control Panel screens. After that, the Server, Network, Printer, PS, Color, and Job Log Setups, in that order, must be configured from the Control Panel.

On Novell or Windows NT (using TCP/IP), and Token Ring networks, the network servers should be configured for printing to the DocuColor before you enter network settings on the DocuColor. The diagrams on pages 1-4 through 1-10 give chapter references for Network Setup.

You'll need a live network connection so the DocuColor can query the network for zones, servers, and server-based queues.

Whenever the configuration of servers, printers, or the network itself changes at your site, you can alter individual settings to correspond to the changed environment. Likewise, if printing needs or administrative requirements change, you can alter the corresponding settings.

NOTE: Changing network or port settings may require that you make changes in more than one Setup area.

DocuColor Setup from the Control Panel

Setup, performed from the Control Panel right after powering on the DocuColor, configures the DocuColor to communicate with other devices and manage print jobs sent to it.

There are six groups of Setup options:

- Server Setup to specify system options
- Network Setup to specify all the active network systems that will transmit print jobs to the DocuColor
- Printer Setup to specify the way print jobs and queues are managed on the color server
- PS Setup to specify PostScript options
- Color Setup to specify color printing parameters
- Job Log Setup to specify how the DocuColor handles its log of printed jobs

The Setup menus also allow you to calibrate the DocuColor, create and change an administrator password, and clear the jobs queued on the server.

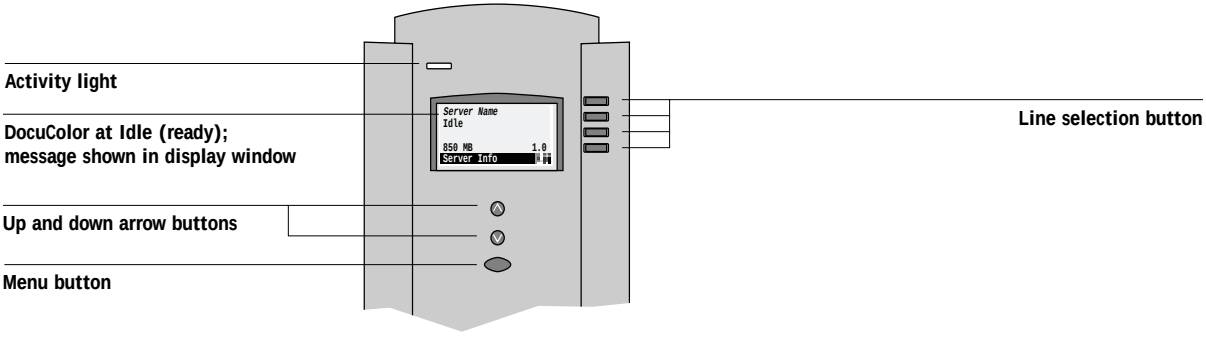
Accessing Setup options

The Control Panel on the front of the DocuColor enables you to set options and view information about jobs printed to the DocuColor.

It comprises the following parts:

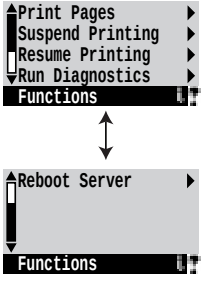
- Display window showing status information and options for setting up the DocuColor
- Line selection buttons
- Up and down arrow buttons
- Menu button (escape)
- Activity light that indicates normal or problem activity

DocuColor Control Panel



The *User Guide* describes the online display screens in detail. This chapter describes only the screens you might see when performing Setup.

TO ACCESS SETUP WHEN THE DOCUCOLOR IS AT IDLE:



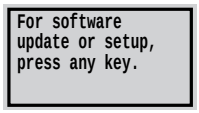
1. **When the DocuColor displays the Idle screen, press the Menu button on the Control Panel to go to the Functions menu.**

   The Functions menu has two screens, as shown to the left.

2. **Press the down arrow button to view the second screen of the Functions menu.**

3. **In the second screen, press the button to choose Reboot Server.**

   After automatic startup diagnostics, the DocuColor displays the entry screen.

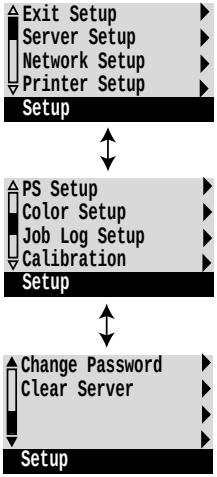


4. **At the startup message, press any button.**

   The Start Up screen is displayed.

5. **Choose Run Setup to access all setup menus.**

   The Install Software and Format Disk commands are for service technicians.



6. **Press the line selection button to choose a Setup menu or command.**

   Press the down arrow to view the second and third screens of the main Setup menu.

7. **Choose setups in the same order as they appear in the menu: Server Setup, Network Setup, Printer Setup, PS Setup, Color Setup, and then Job Log Setup.**

   The sequence is important for first-time Setup.

   Later, just go directly to the menu you want to change. However, if you make changes in Network Setup, you may need to change some settings in Printer Setup as well.

   NOTE: If you make changes in Server, Network, or Printer Setup, you'll need to update the system configuration by opening and saving the other Setups even if you haven't changed any other settings.

TO ACCESS SETUP WHEN THE DOCUCOLOR IS OFF:

1. **Make sure the DocuColor is connected to the copier and connected to the network you will use.**

2. **Turn on the DocuColor.**

   The startup diagnostics are performed.

3. **At the startup message, press any button.**

4. **Continue with step 5 from the previous procedure.**

   Review the settings described in this chapter. For more information on calibration, and on Control Panel screens other than those in Setup, see the *User Guide*.

Running DocuColor Setup

When you restart the DocuColor and choose Run Setup, you can select one menu after another and enter information about your DocuColor and your network and printing environment.

In each Setup, the last line of the display window tells you the name of the current Setup menu. Most of the screens you see are shown on the Control Panel Map, a multiple-page flowchart that can be printed from the color server. When the color server is displaying the Idle screen (shown in the figure on page 2-3), you can print the Control Panel Map by choosing Print Pages from the Functions menu, and then choosing Control Panel Map.

Types of setup screens

There are two types of setup options:

Multiple choice questions

You are given choices (for example, Yes or No, or a list of options from which to choose). Only one choice is displayed at a time, in highlighted text. The currently selected (or the default) value appears first.

Use the up and down arrow buttons to scroll through the selections, and choose OK when the correct information is displayed.

Information entry options

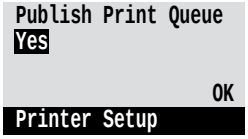
You must specify the information for your site. For example, the printer name or IP address.

In that case, use the up and down arrow buttons to scroll the alphabet and numerals to make your selection.

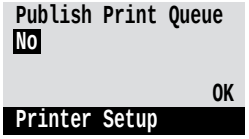
The cursor position is made evident, and two of the line selection buttons become left and right buttons. Arrows appear on the display window next to the corresponding buttons. Use these buttons to move between positions for entering information.

NOTE: When you enter text, enter it from left to right, as the left-arrow button acts as a delete key as well as a cursor-moving key. This is indicated in the display by the delete symbol (⌫).

Example: Multiple choice



Press the up or down arrow button to display the other option or options.

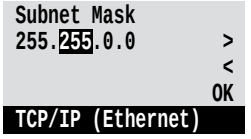


When the setting you want is displayed, press the button beside OK to continue.

Example: Information entry with fields

From the starting position, press the right arrow button to move the cursor to the right.

The next field is selected. Press the up or down arrow button to change the number.



When the correct number is displayed, press the right arrow button to move to the third field. Press the left arrow to go back and edit, or press OK to accept the choice and continue.

Example: Information entry with individual characters

From the starting position, press the up or down arrow button to enter the first character.

When the correct character is displayed, press the right arrow button to move the cursor to the next position.

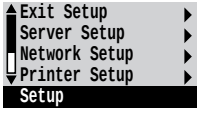
Press the up or down arrow to enter a character in the second position.
The delete button erases the current character and moves the cursor to the left.

NOTE: If you make a mistake during Setup, you can always use the Menu button to cancel without saving changes. If you are viewing a Setup screen, pressing the Menu button cancels what you are doing in the current screen to bring you to the next higher level menu. You may need to press Menu more than once to return to the top level for the particular Setup procedure with which you are working. Once at the top level, you can enter the current Setup again, or exit without making changes.

When you have entered all the settings or made all the changes you want, you need to save the changes. You are usually prompted to do so. If you choose Yes, your settings overwrite previous settings. If you choose No, your previous settings are retained. If necessary, the DocuColor reboots after you exit from the Setup menu.

Server Setup options

The Server Setup menu enables you to specify system information that pertains to the DocuColor itself and all users. Accessing the menu is described on page 2-2.



← **Press button for Server Setup**

When you choose Server Setup, the options appear in sequence, as described below. Default values, where applicable, are shown in square brackets.

Server Name
Default server name

Use this option to give the DocuColor a name (up to 10 characters long).

Enter this name when you configure the Chooser list for utilities on IPX/SPX networks (see the *Getting Started*).

If you have multiple color servers and give them the same name, a unique number is appended to the name that appears in the Chooser. Although this routes jobs correctly, it may be inconvenient to users and is not a recommended practice.

System Date

Use this option to change the system date. Enter the date in the standard form for your usage: either MM/DD/YY or DD/MM/YY. The date is used on the cover page and on Job Logs.

System Time
HH:MM

Use this option to change the system time. Enter the time based on the 24-hour clock in the form HH:MM (Hours:Minutes). The time is used on the cover page and on Job Logs.

Print Start Page
No/Yes [No]

Use this option to specify whether the DocuColor should print a start page every time it is powered on or rebooted. The start page displays information about the DocuColor, including the server name, current date and time, amount of memory installed in the DocuColor, last calibration date, network protocols enabled, and connections published.

When Print Start Page is set to Yes, the DocuColor must be connected to a copier before it can reach the Idle status screen.

Use Character Set
DOS/Windows [Windows]

Use this option to specify whether the Control Panel should use the Windows or DOS character set for displaying filenames. This is important if filenames include accented or composite characters (such as é, ü, or æ).

For mixed-platform networks, choose the predominant client type, or whichever option gives better overall representation of the special characters you use.

Enable Printed Queue
Yes/No [Yes]

Select Yes if you want to enable the Printed queue, a storage location on the DocuColor disk for recent jobs that were printed from the Print queue. Users with access to the Spooler or the WebSpooler can reprint their own jobs from the Printed queue without sending them to the DocuColor again. If you select No, jobs are deleted from the DocuColor disk immediately after they are printed.

Jobs Saved in Printed Queue
1-99 [10]

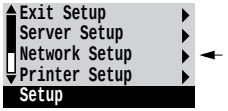
This option appears only if Enable Printed Queue is set to Yes. Specify the number of jobs to be stored in the Printed queue. Note that jobs in the Printed queue take up space on the DocuColor hard disk.

Save Changes
Yes/No [Yes]

Select Yes to activate any changes made in the Server Setup; select No to return to the main Setup menu without making any changes.

Network Setup options

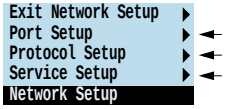
Network Setup configures the DocuColor to receive print jobs over the network systems that will be used at your site.



In the Setup menu, choose Network Setup.

The Network Setup menu includes three submenus that let you choose port types, protocols, and network services. You must perform Port Setup and enable at least one port.

For each item you enable, you are prompted to enter settings for that item. Default values, where applicable, appear in square brackets.



In Network Setup you specify network addresses and names to be used by workstations, servers, and the DocuColor when they communicate with each other.

You need to display and select options only for the network systems that are currently used at your site. If your network requirements change, you can change the Network Setup at any time.

If the DocuColor is configured to enable more than one protocol, it automatically switches to the correct protocol when it receives a print job. When the parallel port and one or two network ports are enabled, print jobs can be received over all of those ports at the same time.

The available network types, and the Setup areas that pertain to them, are summarized in the following tables.

For this Network or Connection Type:	Use this Port Setup:	Use this Protocol Setup:	Use this Service Setup:
TCP/IP over Ethernet	Ethernet Setup	TCP/IP Setup: Ethernet Setup	LPD Setup Web Services Setup Windows Setup
IPX/SPX over Ethernet	Ethernet Setup	IPX/SPX Setup	PServer Setup (NDS, Bindery, or both)
Parallel	Parallel Port Setup	—	—

If the Token Ring option is installed, you have these additional options:

For this Network or Connection Type:	Use this Port Setup:	Use this Protocol Setup:	Use this Service Setup:
TCP/IP over Token Ring	Token Ring Setup	TCP/IP Setup: Token Ring Setup	LPD Setup Web Services Setup Windows Setup
IPX/SPX over Token Ring	Token Ring Setup	IPX/SPX Setup	PServer Setup (NDS, Bindery, or both)

TO ACCESS NETWORK SETUP OPTIONS:

1. **Confirm that the network cable is connected to the DocuColor.**

   During Network Setup, the DocuColor queries the network for zones, servers, and server-based queues. If you perform Network Setup without a connected and functioning network, default settings are used that may not fulfill your needs.

2. **Choose Network Setup from the main Setup menu.**
3. **Choose Port Setup.**
4. **To use Ethernet, choose Ethernet Setup from the Port Setup menu, and enter the appropriate settings.**
5. **If the Token Ring option is installed, choose Token Ring Setup and enter the appropriate settings.**
6. **To print to the parallel port, choose Parallel Port Setup from the Port Setup menu, and enter the appropriate settings.**
7. **When you have finished entering port settings, choose Exit Port Setup and then choose Protocol Setup.**
8. **Enter the appropriate settings for the protocol or protocols you will use.**
9. **When you have finished entering protocol settings, choose Exit Protocol Setup and then choose Service Setup.**
10. **Enter the appropriate settings for the services you will use.**

The options are described in detail in the following pages.

TO EXIT NETWORK SETUP:

1. **When you have finished entering service settings, choose Exit Network Setup.**
2. **Choose Yes when prompted to save changes.**
3. **From the main Setup menu, choose another Setup or choose Exit Setup.**

   For first-time Setup, or if you have configured a new connection, choose Printer Setup after you finish Network Setup.

Port Setup options

You can enable Ethernet and parallel communication simultaneously. If the Token Ring option is installed, you can also enable Token Ring. To configure the DocuColor, choose each port type you use and enter the settings for that port. Since network setups are nested, the names of higher-level menus are shown in this chapter to the left of each menu heading.

Network Setup ▶
Port Setup ▶

Ethernet Setup

Enable Ethernet
Yes/No [Yes]

Select Yes if you have Ethernet cabling connected to the DocuColor.

Ethernet Speed
Auto Detect/100 Mbps/10 Mbps [Auto Detect]

This screen appears only if the 100BaseT option is installed.

Select Auto Detect if your network environment is mixed, or select the speed (10 Mbps or 100 Mbps) of the network to which the DocuColor is attached.

You must restart the DocuColor after changing the speed before resuming operations.

Network Setup ▶
Port Setup ▶

Token Ring Setup

Enable Token Ring
Yes/No [No]

Select Yes if the DocuColor is to be connected to a Token Ring network.

Maximum Frame Size
(bytes)
4202/2154/1130/632 [4202]

Select the maximum frame size recommended by the network administrator at your site. If you are uncertain of the setting to use, select the default value (4202).

Enable Source Routing
Yes/No [Yes]

Select Yes if your network supports source routing.

Source Routing
Request All Route
Yes/No [Yes]

This option appears only if you enabled Source Routing. Select Yes if you want the Request packet to travel to its destination by all routes.

Source Routing
Respond All Route
Yes/No [No]

This option appears only if you answered No to the previous option. Select Yes if you want the Response packet to return by all routes to the originating computer.

Parallel Port Setup options

You must enable the parallel port in order to enter the Parallel Port Setup options and print to the parallel port.

Network Setup ▶
Port Setup ▶

Parallel Port Setup

Enable Parallel Port
No/Yes [No]

Select Yes if you want to print through the parallel port. You can connect a single PC-compatible computer to the parallel port and print directly to the DocuColor.

NOTE: Enabling the parallel port does not conflict with using Ethernet or Token Ring communication with the DocuColor.

Port Timeout in Seconds
5-60 [5]

This option appears only if Enable Parallel Port is set to Yes. Your setting determines how long the DocuColor waits without receiving data from the parallel port before deciding that the current job is complete. Until the timeout, the DocuColor cannot receive new jobs through the parallel port, but it can continue to receive network print jobs.

Ignore EOF Character
Yes/No [No]

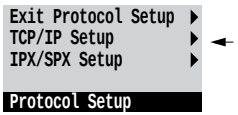
This option appears only if Enable Parallel Port is set to Yes. This option specifies that the DocuColor should ignore end-of-file (EOF) messages in a file. This option must be set to Yes to print PostScript files in binary format (not ASCII); under normal circumstances, it should be set to No. When this option is set to Yes, the DocuColor uses the parallel port timeout value to determine when the end of the file has been reached.

When you have configured the port options, choose another port type, or choose Exit Port Setup and proceed to Protocol Setup.

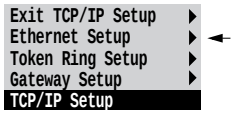
Protocol Setup options

To configure the DocuColor, choose each protocol and enter the settings for that protocol. You can enable TCP/IP and IPX/SPX communication simultaneously.

TCP/IP Setup options



To configure the DocuColor for TCP/IP, choose TCP/IP Setup.



Choose Ethernet Setup and enter the appropriate settings. Choose each network type you use (Ethernet and/or Token Ring) and enter the appropriate settings. Token Ring Setup appears as an option only if you have enabled Token Ring in Port Setup. If your network uses a gateway, enter the gateway address in Gateway Setup.

NOTE: If TCP/IP is running on *both* an Ethernet and a Token Ring network, it is assumed that the two networks are already routed to each other. The DocuColor does not function as a router.

TCP/IP Setup with Ethernet

Network Setup ▸
Protocol Setup ▸
TCP/IP Setup ▸

Ethernet Setup

Enable TCP/IP for Ethernet
Yes/No [Yes]

Select Yes if you have a TCP/IP network connected to the DocuColor over Ethernet cabling.

You need to enable TCP/IP for Ethernet to use the WebTools over Ethernet. If you are using TCP/IP for printing from Windows NT workstations, enabling TCP/IP here also enables you to use the remote utilities from Windows NT workstations using TCP/IP protocols.

IP Address
[127.0.0.1]

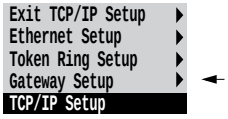
Enter the DocuColor IP address for Ethernet. The DocuColor is shipped with an invalid IP address. If you plan to print with TCP/IP, you must first assign the DocuColor a unique, valid IP address. For information about setting up printing with TCP/IP, see Chapter 3.

Subnet Mask
[255.255.255.0]

This option lets you modify the subnet mask for printing with TCP/IP over Ethernet. The subnet mask is set to 255.255.255.0 by default. If you set the IP address and you need to set the subnet mask, enter one of the following values:

- 255.0.0.0—If the IP address starts with a number less than 128.
- 255.255.0.0—If the IP address starts with a number from 128 through 191.
- 255.255.255.0—If the IP address starts with a number greater than 191.

Gateway



If your TCP/IP network has a gateway, and users outside the gateway plan to print to the DocuColor using TCP/IP, choose Gateway Setup and enter the gateway address here.

The gateway address applies to either a Token Ring or an Ethernet network. If TCP/IP is running on *both* an Ethernet and a Token Ring network, the gateway address you enter has to match the network number of either the Ethernet or the Token Ring network.

Network Setup
Protocol Setup
TCP/IP Setup

Gateway Setup

Gateway Address [127.0.0.1]

Use this option to set the gateway address for printing with TCP/IP. By default, the loopback address, 127.0.0.1, is set. (The loopback address is a specially reserved address that allows for certain TCP/IP diagnostic tests to be run without being connected to a network.)

Choose the next network type or choose Exit TCP/IP Setup and proceed to Service Setup.

TCP/IP Setup with Token Ring

Enable TCP/IP for Token Ring, and enter the IP address and subnet mask. Then, if your TCP/IP network has a gateway, and users outside the gateway plan to print to the

DocuColor using TCP/IP, choose Gateway Setup and enter the gateway address (see page 2-16).

Network Setup ▸
Protocol Setup ▸
TCP/IP Setup ▸

Token Ring Setup

Enable TCP/IP for Token Ring
Yes/No [No]

Select Yes if you have a TCP/IP network connected to the DocuColor over Token Ring.

If you use Token Ring, enabling TCP/IP for Token Ring is required for enabling the WebTools.

NOTE: If you are using TCP/IP for printing from Windows NT workstations, enabling TCP/IP here also enables you to use the remote utilities from Windows NT workstations using TCP/IP protocols.

IP Address
[127.0.0.1]

Enter the DocuColor IP address for Token Ring. The DocuColor is shipped with an invalid IP address. If you plan to print with TCP/IP, you must first assign the DocuColor a unique, valid IP address. For information about setting up printing with TCP/IP, see Chapter 3.

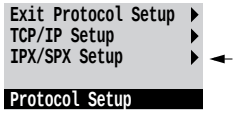
Subnet Mask
[255.255.255.0]

This option lets you modify the subnet mask for printing with TCP/IP over Token Ring. The subnet mask is set to 255.255.255.0 by default.

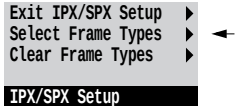
If you set the IP address and you need to set the subnet mask, enter one of the following values:

- 255.0.0.0—If the IP address starts with a number less than 128.
- 255.255.0.0—If the IP address starts with a number from 128 through 191.
- 255.255.255.0—If the IP address starts with a number greater than 191.

IPX/SPX Setup options



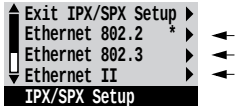
To configure the DocuColor for IPX/SPX protocols, choose IPX/SPX Setup from the Protocol Setup menu.



Select Frame Types

Choose Select Frame Types. You must choose at least one frame type to enable IPX/SPX protocols. The DocuColor supports the following frame types for IPX/SPX:

- for Ethernet—Ethernet 802.2, Ethernet 802.3, Ethernet II, and Ethernet SNAP
- for Token Ring—Token Ring and Token Ring SNAP



The frame selection screen allows you to make multiple selections. Depending on your Port Setup selection, only Ethernet frame types, only Token Ring frame types, or all frame types are displayed. Press the line selection button beside each frame type used on your IPX/SPX network. An asterisk (*) appears beside each selected frame type. (Press the line selection button again to deselect a frame type.) Use the arrow keys to scroll to additional frame types. The DocuColor binds to each frame type as you select it.

When you have selected all the frame types used, choose Exit IPX/SPX Setup.

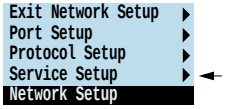
Clear Frame Types

If you selected several frame types by mistake, you can clear them all at once by choosing Exit IPX/SPX Setup, then choosing IPX/SPX Setup and selecting Clear Frame Types.

For protocols other than IPX/SPX, the frame type is automatically enabled and does not require setup, as follows:

With this protocol:	And these printing services:	This frame type is automatically enabled:
TCP/IP with Ethernet	LPD (Line Printer Daemon)	Ethernet II
TCP/IP with Token Ring	LPD (Line Printer Daemon)	Token Ring SNAP

Service Setup options



Network Service Setup has options for TCP/IP and IPX/SPX networks.

- For TCP/IP, LPD Setup enables lpd printing. Web Services Setup enables the http protocol and, therefore, use of the WebTools. Windows Setup enables the Microsoft SMB protocol, which supports peer to peer printing, also known as WINS or Windows printing.
- For IPX/SPX networks, PServer Setup allows you to enter the names of the Novell objects that are concerned with DocuColor print jobs. PServer is a program in the DocuColor that services all the Novell print queues assigned to the Novell print servers you have set up for printing to the DocuColor. When you choose PServer Setup and enable PServer, you can set up NDS (Novell Directory Services), Bindery Services, or both. NDS is used with NetWare 4.x; Bindery Services are used with NetWare 3.x or with NetWare 4.x in bindery emulation mode.

NOTE: Due to its length, the description of PServer Setup options is intentionally placed at the end of this section (after the description of Web Services Setup options). This differs from the order in which the options appear in the Control Panel display.

LPD Setup options

Network Setup ▶
Service Setup ▶
LPD Setup ▶

Enable LPD
Yes/No [Yes]

Select Yes to allow lpd printing. See “Setting up the DocuColor on TCP/IP networks” on page 3-31 for more information.

Windows Setup options

Network Setup ▸
Service Setup ▸
Windows Setup ▸

Enable Windows Printing
Yes/No [Yes]

Select Yes to enable Windows printing.

Enabling Windows Printing enables SMB (Server Message Block), the built-in Microsoft file and printer sharing protocol. Enabling SMB allows the DocuColor to be listed on the network so that Windows clients can print to a particular queue (Print or Direct) on the DocuColor without any other networking software.

Use WINS Name Server
Yes/No [No]

Broadcasts from SMB devices cannot be routed. A WINS name server is necessary to carry the broadcast into all network segments. Setting up the WINS name server is outside the scope of this manual. To find out if a name server is available, contact your MIS department.

WINS IP Address

This option appears only if you choose Yes for WINS Name Server. Enter the IP address of the WINS Name Server.

Server Name
Default Name

The server name is the name that will appear on the network. It can, but does not have to, be the same name as the server name assigned in Server Setup (see page 2-7).

Server Comments

Server comments (optional) can contain information about the printer.

Workgroup or Domain

Enter the domain you want the DocuColor to appear in.

Web Services Setup

Network Setup ▸
Service Setup ▸
Web Services Setup ▸

Enable Web Services
Yes/No [No]

Select Yes if TCP/IP is enabled on the DocuColor and on user workstations, and you wish to make the WebTools available to users (see page 3-28). The WebTools include WebSpooler and Installer. A Java-enabled Web browser and a valid IP address are required for each user. See the *User Guide* for details on browser choice and workstation requirements.

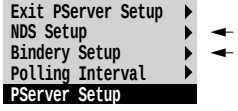
NOTE: You must publish the Print queue to use the WebTools (see page 2-33).

PServer Setup options

Network Setup ▸
Service Setup ▸
PServer Setup ▸

Enable PServer
Yes/No [No]

Select Yes if you have a Novell network connected to the DocuColor.



Choose NDS Setup if your network uses NetWare 4.x in native mode. Choose Bindery Setup if your network uses NetWare 3.x or uses NetWare 4.x in bindery emulation mode.

If your network uses *both* NDS and Bindery, set up NDS first. Setting up NDS after Bindery will overwrite Bindery Setup.

If your network uses both NDS and Bindery, and uses NetWare 4.x servers in bindery emulation, note that the DocuColor cannot service NDS and bindery emulation servers on the same NDS tree.

Network Setup ▸
Service Setup ▸
PServer Setup ▸

NDS Setup

Before entering NDS settings, be sure the DocuColor is connected to the network and you have already configured an NDS directory tree with a Printer, a Print Server, and one or more Print Queue objects for DocuColor jobs (see page 3-4). To perform NDS Setup you may need permission to browse the NDS tree. If access to the Print Server is restricted, you'll need a login password.

The main objective of NDS Setup is to specify the Print Server object. In addition, you can indicate the location of the DocuColor print queues.

Note that the terms NetWare server, Novell server, and IPX server are in common use and are used here interchangeably to mean the server on an IPX network running Novell NetWare networking software.

Enable NDS
No/Yes [No]

Select Yes if the NetWare servers you will use to print to the DocuColor are running NetWare 4.x in native mode.

Select NDS Tree
[List of trees]

Use the arrow keys to browse the list of NDS trees available to the DocuColor. Choose OK when you have displayed the tree that contains the Printer, Print Server, and print queue objects you have previously defined for the DocuColor.

Your new NDS tree selection automatically overwrites any previous tree selection. If you change the NDS tree selection and there are also current Bindery settings, you are alerted that they will be deleted. If you continue with NDS Setup, you can replace Bindery settings afterwards. To exit NDS Setup, choose Cancel or choose No in the confirmation screen.

Is user login needed to browse NDS tree? Yes/No [No]

Select No if no password is required to browse the tree. You can proceed to navigate to the Print Server object (see page 2-24).

Select Yes if network permissions require that you log in to browse the NDS tree and see the Print Server object you want to select. If you select Yes, you are prompted to navigate to the User Login object.

Navigate the NDS tree to the User Login object.

This message is displayed if you selected Yes for the previous option. Choose OK and browse the NDS tree as described in the following paragraphs.

NDS Tree name Object list, "..."

Browsing to find the User Login object begins with the NDS tree that you selected previously (with Select NDS Tree). Use the up and down arrow buttons to scroll a list of objects in the tree beneath the [Root] in the hierarchy, or use the navigation symbol ".." to go up one level at a time.

In each subsequent browse screen, the top line represents your current location. The second line contains:

- A list of objects in the current container directly below your current location
- The symbol ".." to go up one level.

With an object selected, choose OK to travel down the tree, or choose ".." to go up the tree. When you select an object and choose OK, that object is then displayed on the top line, and the second line lists objects directly below it.

Continue to browse the NDS tree until the User Login object is displayed in the second line. Choose OK.

Enter Password

Enter the login password for the NDS tree, using the up and down arrow buttons to select characters, and the left and right arrow buttons to move the cursor. Choose OK.

Navigate the NDS tree to the Print Server.

Press OK to browse the NDS tree to the Print Server object.

Browsing to find the Print Server object begins with the NDS tree that you selected previously (with Select NDS Tree). In each subsequent browse screen, the top line represents your current location. The second line contains:

- A list of objects in the current container directly below your current location
- The symbol ".." to go up one level.

With a container object selected, choose OK to travel down the tree, or choose ".." to go up the tree. When you select an object and choose OK, that object is then displayed on the top line, and the second line lists objects directly below it.

When the Print Server is displayed in the second line, choose OK.

Enter Print Server Password

Enter the Print Server password, using the up and down arrow buttons to enter characters, and the left and right arrow buttons to move the cursor. Choose OK. (If no password is required, choose OK.)

Server should look for print queues in:

Entire NDS Tree/Specified subtree [Entire NDS Tree]

By default, the DocuColor searches the entire NDS tree for DocuColor print queues. This option lets you restrict the search for DocuColor print jobs to a subtree (the Print Queue root) in which the DocuColor print queues have been defined. This makes the search more efficient. Select Entire NDS tree if the tree is small. Select Specified subtree to restrict the search and specify the subtree.

If you select Entire NDS tree, choosing OK returns to PServer Setup. Proceed with Bindery Setup (see page 2-26), set the Polling Interval (see page 2-30), or choose Exit PServer Setup to return to the Service Setup menu.

Browse to the root of the Print Queue subtree.

This message is displayed if you selected Specified subtree in the previous option. Choose OK to browse the NDS tree to the Print Queue subtree.

Browsing to find the Print Server object begins with the NDS tree that you selected previously (with Select NDS Tree). In each subsequent browse screen, the top line represents your current container. The second line contains:

- A list of objects directly below your current location
- The symbol ".." to go up one level
- The symbol "." to select the current container object (displayed in the top line) without traveling down the tree

With an object selected, choose OK to travel down the tree, or choose ".." to go up the tree. When you select an object and choose OK, that object is then displayed on the top line, and the second line lists objects contained within.

When the container that contains print queues is displayed in the second line, choose OK. In the next screen, choose "." and then choose OK to select the object in the top line.

When the DocuColor displays the container name, choose OK to return to PServer Setup.

Proceed with Bindery Setup (see page 2-26), set the Polling Interval (see page 2-30), or choose Exit PServer Setup to return to the Service Setup menu.

Bindery Setup options

Network Setup ▸
Service Setup ▸
PServer Setup ▸

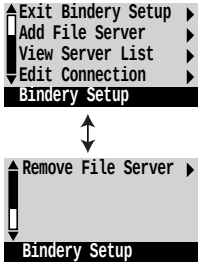
Bindery Setup

Use Bindery Setup if you have already configured one or more bindery servers (file servers running NetWare 3.12 or NetWare 4.x in bindery emulation) with a Print Server and a Print Queue for DocuColor jobs (see page 3-6). Before entering bindery settings, be sure the DocuColor is connected to the network and the NetWare file server is running. You'll need a login name, and, if access to the file server or print server is restricted, you'll need a login password.

NOTE: The terms NetWare server, Novell server, and IPX file server are in common use and are used here interchangeably to mean the server on an IPX network running Novell NetWare networking software.

Bindery Setup menu

Because you can set up more than one Novell server to handle DocuColor print jobs, an additional menu is displayed for this purpose. The options are:



- Add File Server—creates a new file server connection to the DocuColor. You can set up a maximum of eight file server connections. After you have finished adding a new server, you return to the Bindery Setup menu, and you can set up another server if you wish.
- View Server List—displays the list of file servers that have already been selected to communicate with the DocuColor.
- Edit Connection—lets you change the NetWare Print Server that will print to the DocuColor.
- Remove File Server—lets you disconnect the DocuColor from a file server to which it is currently connected. Remove a file server when you want to reduce the number of connections to the DocuColor or re-assign the connection to a different NetWare file server.
- Exit Bindery Setup—after you added all servers, viewed a list of file servers, or removed a file server from the list.

NOTE: If you change your mind about any of the menus you have selected, you can use the Menu button to escape and return to the main Bindery Setup menu. To cancel all changes you must exit Network Setup.

Network Setup ▶
Service Setup ▶
PServer Setup ▶
Bindery Setup ▶

Add File Server

This option gives you two ways to add a Novell NetWare file server.

Select File Server
From List/Search Name

You may select the file server from a scrollable list, or by a name search. Choose From List if your network doesn't have a large number of file servers. Select Search Name if the number of file servers is so large that scrolling through the list would take a long time.

If you selected **From List**:

Add Server
[list of all servers]

The DocuColor obtains a list of NetWare file servers by querying the IPX network. Use the up and down arrows to select a NetWare file server from the list. Choose the server on which you have configured a print server and print queue to handle DocuColor print jobs.

If you selected **Search Name**:

Enter First Letters of Server Name

Use the up and down arrows on the arrow button to enter the first letters of the name of the file server you want to use, and choose OK.

Add Server
[list of servers matching the search]

This option is displayed if you entered letters to search. Scroll to select the server you want from the list.

Once you have chosen a file server, the DocuColor immediately tries to log in as a guest without a password. If it succeeds, it skips to the NetWare Print Server option.

If you try to add a file server but all DocuColor connections are already being used, you are prompted to remove a file server (see "Remove File Server" on page 2-30).

File Server Login
administrator/supervisor/Enter Login Name [supervisor]

This option appears only if a password is required for login. Choose Enter Login Name to enter your own login name and password or to log in as a guest. Choose administrator or supervisor if you have those privileges.

Enter Your Login Name
[guest]

This option and the next only appear if you selected Enter Login Name for the File Server Login. Enter your login name or select guest.

Enter Your File Server Password

Enter the password for logging in to your NetWare file server. If you enter the password incorrectly, you are prompted to re-enter it.

NetWare Print Server
[list of print servers on selected file server]

This option appears only if there is more than one print server defined on the selected Novell file server. From the list of print server names, select the name of the print server that you have configured in the NetWare utility PCONSOLE. This is the print server that will route print jobs to the DocuColor from computers on IPX networks.

Enter Your Print Server Password

This option appears only if your NetWare print server is set up to require you to log in with a password. Enter your print server password.

Choose Add Server again until you have connected each NetWare file server you have configured for printing to the DocuColor. When you have added all the IPX file servers for your site, choose Exit Bindery Setup.

Network Setup ▸
Service Setup ▸
PServer Setup ▸
Bindery Setup ▸

View Server List

Supported Servers

This option lets you view the list of file servers currently connected to the DocuColor, that is, servers you have added in Bindery Setup. You are notified if there are none. When you choose OK, you return to the Bindery Setup menu.

Network Setup ▸
Service Setup ▸
PServer Setup ▸
Bindery Setup ▸

Edit Connection

On each connected NetWare file server, you have defined a print server to handle DocuColor print jobs. Use this option to change the print server assigned to the DocuColor.

Choose File Server
[File server name]

From the list of connected NetWare file servers, choose the file server whose print server you wish to change.

NetWare Print Server
[List of print servers on selected file server]

Choose the name of the print server that you now wish to use. This is the print server that will route print jobs to the DocuColor from computers on IPX networks.

If you change your mind, press the Menu button to return to the Bindery Setup menu without making a change.

Enter Your Print Server Password

This option appears only if your NetWare print server is set up to require you to log in with a password. Enter your print server password.

The Bindery Setup menu is displayed again.You can edit other connections, choose another Bindery Setup option, or choose Exit Bindery Setup.

Network Setup ▸
Service Setup ▸
PServer Setup ▸
Bindery Setup ▸

Remove File Server

Remove support for [File server name]

Allows you to select a NetWare file server from a list of connected file servers and remove the connection to it. You are notified that you have removed the connection, and the Bindery Setup menu is displayed again. If you change your mind and don't want to remove any of the file servers, press the Menu button.

You can choose another Bindery Setup option (such as adding another file server) or choose Exit Bindery Setup and proceed to set the polling interval.

Network Setup ▸
Service Setup ▸
PServer Setup ▸
Bindery Setup ▸

Exit Bindery Setup

Choose Exit Bindery Setup after you have viewed a list of IPX file servers, removed a file server from the list, connected all the configured NetWare file servers, or set the polling interval. After you select Exit Bindery Setup, you return to the PServer Setup menu.

Polling Interval options

Network Setup ▸
Service Setup ▸
PServer Setup ▸

Polling Interval

Whether you are using NDS or Bindery services, you may choose Polling Interval from the main PServer Setup menu. If you do not reset the interval, the default value of 15 seconds is used.

NetWare Server Poll Interval in Seconds
1-3600 [15]

Specify the interval, in seconds, at which the DocuColor communicates with the Novell print server to see if there are print jobs waiting.

NOTE: If you select a short interval, the amount of network traffic increases. This may slow down other network jobs.

Exit Service Setup

This returns you to the main Network Setup menu.

Save Changes
Yes/No [Yes]

Select Yes to activate any changes made in Network Setup; select No to return to the main Setup menu without making any changes.

DocuColor printing connections

In DocuColor Printer setup you decide how the DocuColor manages print jobs by deciding which printing connections should be "published" to users over the network. The Direct connection and Print queue are constantly checked for the presence of jobs. If you don't want users to print to a connection, don't publish it.

The DocuColor publishes two types of connections: the Direct connection and the Print queue. You must publish at least one connection to the DocuColor.

Direct connection

Jobs are transmitted to the DocuColor Direct connection only when the DocuColor is ready to print. They remain at the sending workstation until the DocuColor is ready, and are processed as soon as a prior job is finished, before the next queued job is processed.

Jobs sent to the Direct connection are not stored on the DocuColor hard disk. The jobs appear in the Spooler or WebSpooler displays of current jobs, but they cannot be selected for reprinting, moving or deletion. Therefore the Direct connection provides a measure of security for sensitive files.

If you plan to download fonts to the DocuColor via the network, you must publish the Direct connection.

NOTE: You cannot use the Direct connection for lpd printing over TCP/IP.

Queues

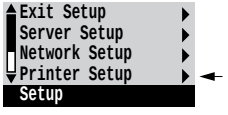
A queue is a storage area for print jobs. Queues are particularly useful when many print jobs are being sent to the DocuColor. When a job is printed to a DocuColor queue, it is stored on the DocuColor hard disk rather than the user's hard disk, quickly freeing up the user's workstation.

The DocuColor hard disk supports two queues (Print and Printed). Users may print to the Print queue only.

- **Print queue**—This is the standard DocuColor queue. The DocuColor prints jobs from the Print queue in the order in which they were received. If you plan to use the remote utilities, you must publish the Print queue.
- **Printed queue**—The Printed queue is a job storage area on the DocuColor disk; it contains the most recent jobs printed from the Print queue. The Printed queue makes it convenient to reprint those jobs. A Server Setup option enables this queue and governs the maximum number of jobs retained in it at any given time (see page 2-8). Reprinting jobs in this queue requires the Spooler or WebSpooler.

Printer Setup options

Printer Setup configures the connections and printing behavior associated with a particular printing device.



1. **In the main Setup menu, choose Printer Setup.**
2. **Enter the options appropriate to the printing requirements at the site and the network protocol or protocols you use.**
3. **When you have finished, save changes.**

Printer Setup includes:

- Specifying the copier model
- Publishing the Direct connection and Print queue

In the list of options that follows, default values, where applicable, appear in square brackets.

Printer Model
[Model name]

Use this option to specify the model of copier connected to the DocuColor. This option appears if more than one model is supported by the software and the currently selected video card on the server.

Publish Direct Connection
Yes/No [Yes]

This option enables users to print (or download) jobs to the DocuColor without spooling. Note that jobs printed to the Direct connection are not saved in the Printed queue.

If you plan to download fonts from any system to the DocuColor, you must publish the Direct connection. If you do not want users to print to Direct, choose No.

Publish Print Queue
Yes/No [Yes]

This option enables users to print (or download) jobs to the Print queue. Jobs that are printed to the Print queue are spooled to the DocuColor disk and printed on a first-in, first-out basis. Only queues published in the Printer Setup are available to remote users.

If you plan to print to the DocuColor over a TCP/IP network or use the remote utilities or the WebTools, you must publish the Print queue.

Save Changes
Yes/No [Yes]

Select Yes to activate any changes made in the Printer Setup; select No to return to the main Setup menu without making any changes.

PS Setup options

PS (PostScript) Setup options allow you to set defaults for copier behavior. Some of these defaults can be overridden from within an application.

TO ACCESS POSTSCRIPT SETUP OPTIONS:

1. **In the main Setup menu, choose PS Setup.**
2. **Enter the options appropriate to the printing requirements at the site.**
3. **When you have finished, save changes.**

In the list of options that follows, default values, where applicable, appear in square brackets.

Default Paper Sizes
US/Metric [default depends on language]

Specify whether to print on US paper sizes (for example, letter, legal, tabloid), or Metric paper sizes (for example, A4, A3) by default. When no page size is defined within a PostScript file, jobs are printed on Letter paper if you selected US, or A4 paper if you selected Metric.

Convert Paper Sizes
No Letter/11x17->A4/A3 A4/A3->Letter/11x17 [No]

Specify whether to convert paper sizes in documents automatically to the default paper sizes specified. For example, if you selected Letter/11x17->A4/A3, a letter size document would automatically be printed on A4 paper. If you select No, the server only prints the document if it finds a media source in the size specified by the file.

Print Cover Page
No/Yes [No]

Use this option to specify whether the DocuColor prints a cover (job summary) page at the end of each print job. If you select Yes, each print job is followed by a page containing the name of the user who sent the job, the document name, the color server name, the time the job was printed, the number of pages printed, and the status of the job. If a PostScript error occurred and the Print up to PostScript Error option is set to Yes, the status entry will be the PostScript error message.

NOTE: If you intend to download fonts, be sure to set this option to No.

Allow Courier Substitution
Yes/No [Yes]

Specify whether to substitute Courier for fonts that are unavailable when you download PostScript files to the DocuColor, or when you print a document for which you do not have the corresponding printer font. If this option is set to No, jobs with fonts that are not available on the DocuColor hard drive generate a PostScript error and do not print.

Print to PS Error
No/Yes [No]

Use this option to specify whether the DocuColor should print the available portion of a print job when it encounters a PostScript error. Select Yes to print the portion of the job that was processed before the error occurred; select No to cancel the print job entirely when a PostScript error is encountered. We recommend leaving this option at No unless you encounter printing problems.

NOTE: If you intend to download fonts, be sure to set this option to No.

Enable Bypass Tray as Default
No/Yes [No]

Select Yes to specify that jobs should be printed from the bypass tray. Use this option to enable printing from the bypass tray when tray selection is not otherwise available in the interface, such as when printing from the command line (lpr or DOS). In general, select No when the interface permits tray selection on a job-by-job basis.

Enable Sorter as Default
No/Yes [No]

Select Yes to specify that jobs should be sorted by default. Use this option to enable sorting when the Sorter option is not otherwise available in the interface, such as when printing from the command line (lpr or DOS). In general, select No when the interface permits sorting on a job-by-job basis.

Save Changes
Yes/No [Yes]

Select Yes to activate any changes made in the PS Setup; select No to return to the main Setup menu without making any changes.

2

Color Setup options

Color setup options allow you to set the parameters the DocuColor uses to control color output.

TO ACCESS COLOR SETUP OPTIONS:

1. **In the main Setup menu, choose Color Setup.**

2. **Enter the options appropriate to the printing requirements at the site.**

   In the list of options that follows, default values, where applicable, appear in square brackets.

   Default CRD
   Photographic/Presentation/Solid [Presentation]

   The CRD (Color Rendering Dictionary) used defines how color will be converted from RGB data to printed output. Photographic mode, designed for images, retains the relative balance between colors to maintain the overall appearance of the image. Presentation mode, designed for bright colors, produces the saturated prints needed for most business presentations but handles continuous tone images the same way the Photographic mode does. Solid mode, designed for spot colors, retains the absolute value of each color. This is particularly useful for images such as corporate logos.

Administrative functions in the Setup menu

The remaining options in the Setup menu are intended to help you manage print jobs and color output, but are not required for printing:

- In Job Log Setup you specify whether you want the DocuColor to print and clear its log of printed jobs automatically. See the next section for details.
- Calibration enables you to calibrate the DocuColor from the server and lets you preview the results of calibration. It also lets you remove a calibration. See the *User Guide* for a detailed explanation of calibration.
- Change Password enables you to create or change an administrator password on the DocuColor so that casual users cannot enter the Setup menus and change DocuColor settings without permission. In addition, an administrator password controls remote job management functions via the Spooler and the WebSpooler. A password created using the Setup menu prevents DocuColor users from reprinting print jobs, moving print jobs (changing their priority or their queue), and deleting or configuring jobs, other than their own. See the *User Guide* for details.
- Clear Server clears all queued print jobs from the server—jobs in the DocuColor Print and Printed queues. The Job Log is cleared at the same time. If an administrator password has been set, unauthorized users will not see this command (or any of the administrative or Setup options).

DocuColor Job Log Setup

The DocuColor Job Log is a record of all jobs processed or printed on the DocuColor, whether they originate from a user workstation, a networked server, the DocuColor, or a computer attached to the parallel port. The Job Log can be printed at any time from the server or remotely from a workstation running the Spooler or WebSpooler.

The printed Job Log lists accounting information about each job including user name, document name, time and date printed, and number of pages.

By default, the Job Log is not printed automatically or cleared automatically. You can change these defaults in Job Log Setup. You can also clear the Job Log from the Spooler or WebSpooler.

Scroll the second screen of the main Setup menu to choose Job Log Setup.

Enter the options as described below. When you have finished, save changes.

Job Log Setup options

Default values for the following options, where applicable, appear in square brackets.

Auto Print Job Log Every 55 Jobs
Yes/No [No]

Use this option to specify whether you want the DocuColor to print the Job Log after every 55 jobs. If accounting for each printed page is important at your site, and an administrator checks the printed output, set the Job Log for automatic printing.

Auto Clear Job Log Every 55 Jobs
Yes/No [No]

Use this option to specify whether to clear the Job Log after every 55 jobs. If you do not enable this option, and do not clear the Job Log from the DocuColor or the Spooler or WebSpooler, the DocuColor saves a record of all jobs.

NOTE: In addition to Auto Clearing or manual clearing through the Spooler or WebSpooler, the Job Log (together with all queued jobs) is also cleared when you choose Clear Server from the main Setup menu, when system software is reinstalled, or when a new version of system software is installed on the DocuColor.

Job Log Page Size
Tabloid/A3 Letter/A4 [Tabloid/A3]

Select the paper size for printing the Job Log. Fifty-five jobs are listed on a page, regardless of page size. The paper size used depends on the Default Paper Sizes setting in the Printer Setup. If the Default Paper Sizes setting is US, the Job Log is printed on tabloid or letter size paper, with tabloid the default.

Save Changes
Yes/No [Yes]

Select Yes to activate any changes made in the Job Log Setup; select No to return to the main Setup menu without making any changes.

Calibration

The Calibration menu lets you calibrate the copier from the copier glass using AutoCal™ (automatic calibration). The Calibration menu also lets you remove the current calibration. When the DocuColor is calibrated, a color correction curve is applied to every color document that is processed for printing.

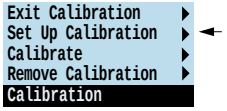
Calibration is based on a set of density measurements and a series of target density values for specific color patches. Calibration compensates for the difference between measured values and target values.

Normally you create a calibration by specifying a standard target to use with measurements that you took or measurements that you previously stored on the DocuColor. You can also specify an alternative target to be used with the current measurements. You don't need new measurements to calibrate with an alternative target. When you choose Apply/Overwrite Calibration, the currently specified target will be used with the latest measurements on the color server.

TO PREPARE FOR CALIBRATION:

1. **If this is the first time you are setting up the DocuColor, complete Server Setup, Network Setup, Printer Setup, PS Setup, and Color Setup, and Save Changes before you perform a calibration.**
2. **When the DocuColor displays the Idle screen, press the Menu button on the Control Panel to go to the Functions menu.**
3. **Press the down arrow to view the second screen of the Functions menu.**
4. **In the second screen, press the button to choose Reboot Server.**
5. **At the startup message, press any button.**
6. **Choose Run Setup to access all Setup menus.**
7. **Scroll to the second screen of the main Setup menu to choose Calibration.**

When you choose Calibration from the main Setup menu, the following menu is displayed:



8. Choose Setup Calibration, and choose a tray.

You must use Letter/A4 size paper, but you can choose whether you want the paper to feed from a paper tray or via Bypass (manual feed). For more information, see the *User Guide*.

9. Choose Calibrate, and perform calibration as described below.

For more information, see the *User Guide*.

Calibrate

Calibration options are summarized below. See the *User Guide* for calibration procedures and a fuller explanation of calibration options. You can print a Configuration page at the server to find out when the DocuColor was last calibrated. The Start page also contains this information. (To print a Configuration page from a DocuColor at Idle status, press the Menu button to display the Functions screen, scroll down to select Print Pages, and select Configuration.)

Canceling calibration. If any problems arise during calibration, press the Menu button to escape to the Calibration menu.

Select Target
Copier Target/Linear [Copier Target]

The Copier Target calibrates the DocuColor to its defined optimums. The linear target calibrates the DocuColor to a generic standard. Using the Copier Target is strongly recommended.

Print Measurement Page
Yes/No [Yes]

Choose this option to print a page of known color data for measurement. You are notified that the copier is printing a measurement page without calibration.

The copier prints a page of graduated colors that you place on the copier glass.

Measure Page
Yes/No [Yes]

Select Yes to measure the colors on the measurement page. You are prompted to position the page on the copier and press OK.

If you select No, measurement is skipped and the Print Comparison Page option is displayed.

Print Comparison Page
Yes/No [Yes]

Specify Yes if you want the DocuColor to print a page with two versions of a set of test images, one version using a calibration based on your most recent measurements and the selected target, and one with no calibration.

Apply/Overwrite Calibration?
Yes/No [Yes]

Choose Yes if you are satisfied with the calibration shown in the comparison page. The newest calibration overwrites any previous one.

Choose No if for any reason you are not satisfied; you return to the main Calibration screen.

This affects all users. Continue?
Yes/No [Yes]

This is a reminder that calibration is a global setting; if you overwrite calibration, every print job is affected by the new calibration.

If you choose Yes, calibration is overwritten and you return to the main Calibration screen. If you are finished, choose Exit Calibration. The DocuColor reboots.

If you choose No, calibration is not overwritten, and you return to the main Calibration screen.

Remove Calibration

Choose Remove Calibration when you wish to return the server to a default state. You do not need to remove a calibration before applying a new calibration.

This affects all users. Continue?
Yes/No [Yes]

This option is a reminder that calibration is a global setting; if you remove calibration, every print job is affected by your action.

If you choose Yes, the current calibration is removed and you return to the main Calibration screen. If you are finished, choose Exit Calibration. The DocuColor reboots.

If you choose No, the calibration is not removed, but you still return to the main Calibration screen.

Exit Calibration

When you choose Exit Calibration, the DocuColor reboots.

Change Password

Change Password enables you to set or change the administrator password for the DocuColor. The password determines whether a user can modify the Setup options, and whether a user has system administrator control over jobs in the Spooler and WebSpooler queues.

Using the Spooler or WebSpooler, users can move, delete, and configure their own print jobs; the DocuColor system administrator (or anyone with administrator password access) can move, delete, and configure jobs for all users, and can re-order jobs within a queue.

When the DocuColor is installed, there is no password. If you do not create a password, users are not required to enter a password to modify the Setup or use the administrator functions in the Spooler or WebSpooler.

If a password has been set previously, you are required to enter it right after Start Up, when you choose Run Setup. Use the up and down arrow keys to select the characters and the left and right arrows to move between them (see page 2-6).

Scroll to the third screen of the main Setup menu to choose Change Password.

Enter and confirm the password as described below.

New Password

Use the up and down arrow keys to select the characters and the left and right arrows to move between them. Enter characters from left to right, since the left arrow line selection key is a delete key. The password can be any combination of letters and numbers up to 19 characters. Choose OK when you are done. Be sure to write down the password. The only way to remove a password that you can't remember is to reinstall system software.

Verify New Password

Enter the new password again exactly as before to verify that you have entered it correctly. If you make a mistake, you are prompted to enter the password again. The new password is effective until you change it again.

Clear Server

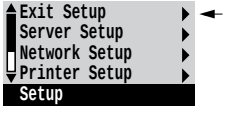
Clear Server enables you to clear all queued print jobs from the server—jobs in the DocuColor Print and Printed queues. The Job Log is cleared at the same time. If you keep Job Logs, be sure to print or export the Job Log before you choose Clear Server.

Jobs can also be deleted, individually or as a group, from the Spooler or WebSpooler. Note that jobs printed to the Direct connection are not stored on the DocuColor at all.

Scroll to the third screen of the main Setup menu to choose Clear Server.

Choose Clear Server if you want to clear all queued print jobs and the Job Log from the server. You are asked to confirm your selection.

Exit Setup



Choose Exit Setup from the first screen of the main Setup menu when you have finished making Setup changes.

The DocuColor reboots and any changes you saved during Setup take effect.

Chapter 3: Setting up Network Servers

This chapter describes environments that typically include one or more network servers—Novell NetWare servers and Windows NT servers—that will share printing to the DocuColor Color Server. It describes setting up servers that use IPX/SPX or TCP/IP protocols for communicating with the DocuColor. In addition, it includes some guidelines for setting up direct communication from Windows NT workstations and UNIX workstations, where a network server is optional. The chapter also outlines the requirements for network clients to print to the DocuColor and to run the remote utilities and the WebTools.

If your network is based on Windows NT, skip to page 3-18. If your network includes UNIX workstations, skip to page 3-29.

NOTE: Setting up a NetWare environment correctly requires the presence and active cooperation of the Novell network administrator. You must have administrator privileges on the network to create new NDS or bindery objects.

DocuColor on an IPX network

The NEST (Novell Embedded Systems Technology) software built into the DocuColor supports the following network operating environments:

- NetWare 4.x—NDS
- NetWare 3.12—Bindery services
- Servers running NetWare 4.x in bindery emulation mode

The term “bindery server” is used to refer to a Novell file server running NetWare 3.12, or running NetWare 4.x in emulation mode. The term “NDS” is used to describe components of a NetWare operating system running NetWare 4.x in native mode.

NOTE: “NDS” is used interchangeably as an abbreviation for either Novell Directory Services or NetWare Directory Services. There is no difference between the two.

NetWare clients print to the DocuColor through the Novell network server. Server setup and client network setup are outlined here. Client printing setup is described in the *Getting Started,* and printing is described in the *User Guide.*

The DocuColor can accept jobs concurrently from NetWare and Windows NT, as well as jobs sent directly from Windows NT or UNIX workstations. NetWare clients on Mac OS computers can print via the NetWare server. NetWare clients on Windows NT computers can print either via the NetWare server or directly.

The DocuColor can receive print jobs from NetWare clients over the Ethernet or Token Ring network topologies. (Appendix A describes the Token Ring option.) During DocuColor setup, you select the frame type or types that will be used for communication between the DocuColor and network servers. Frame type refers to the format of a communications packet; frame types are specified in a startup file when the NetWare server (or any other workstation) loads its network drivers.

In addition to printing, the remote utilities— Spooler and Downloader—are available to Windows 95 users with IPX/SPX or TCP/IP protocols loaded. With these utilities, Windows 95 workstations are communicating with the DocuColor directly, not through the NetWare server.

Tips for experts—IPX networks

Setting up the DocuColor is similar to setting up another PostScript printer on the network. The following information is all that experienced network administrators need.

A DocuColor with IPX connections has these characteristics:

- **Both NetWare 3.12 and NetWare 4.x are supported directly. NetWare 4.x is also supported through bindery emulation.**
- **A minimum connection to the DocuColor consists of a NetWare file server, a NetWare print server, and a NetWare queue.**
- **A single directory tree (for NetWare 4.x) and up to eight bindery servers can be configured simultaneously.**

  This limit is the same regardless of whether the DocuColor is connected to the network via Ethernet, via Token Ring, or both.
- **The DocuColor looks for print jobs on one NetWare print server per bindery server.**
- **Each print server can store jobs for any queue on the DocuColor.**
- **Windows 95 workstations (whether a Novell server is present or not) can use IPX/SPX protocols for communicating with the DocuColor directly to run the utilities.**

Overview of IPX printing to the DocuColor

NetWare file servers support the creation of print queues, which are storage areas for print jobs. When a client on a remote computer decides to print, the job is directed to a print queue on the NetWare file server and spooled to the NetWare server disk, freeing up the client workstation.

The queues on the NetWare server must be named to match the Direct connection and the Print queue on the DocuColor. The NetWare queue names should be given an extension corresponding to the DocuColor queue, as follows:

_print
_direct

NOTE: The extension names must be in all lowercase.

There is no need to rerun Setup when adding or removing a NetWare queue; however you should reboot the DocuColor after a queue is created or removed.

When the DocuColor is configured to connect to a NetWare server, it polls the NetWare server for jobs in each of its queues. If jobs are found, they are transferred over the network to the matching connection: Print to Print, Direct to Direct. While a job is processed and printed, a record of the job is being created. You can access the Job Log containing these records at any time.

Configuring a NetWare server for printing

The following sections explain how to set up a NetWare file server so that networked users can print to the DocuColor from their workstations, and the DocuColor can obtain print jobs from the NetWare server.

For *each* NetWare file server that you configure, follow these general steps. More detail is provided in subsequent sections.

- Make sure the server is connected to a functioning IPX network.
- Log in as the Supervisor on a PC connected to the NetWare file server.
- For NetWare 4.x installations, set up an NDS connection (see page 3-6).
- For NetWare 4.x in emulation mode, set the bindery context (see page 3-9).
- For NetWare 3.12 and for NetWare 4.x in bindery emulation, set up a file server, a print server, and a print queue for the DocuColor (see page 3-12).

With bindery services, you can route all DocuColor print jobs through the same NetWare file server, or you can configure more than one file server to handle DocuColor jobs.

The functions you perform on the Novell server, on the DocuColor, and on the client workstation, are summarized in the following tables. The first table applies to NDS connections, the second to bindery connections.

Complete the operations in the left column, then the center column, then the right column.

Configuring an NDS connection

Abbreviations:
FS = file server
PS = print server
PQ = print queue (on the NetWare server)

On NDS FS	On DocuColor Control Panel	On client workstation
In NETADMIN: Create NDS PQs Create NDS printer and assign PQs Create PS and assign the printer Configure users of the PQs	**Port Setup** Ethernet Setup and/or Token Ring Setup **Protocol Setup** IPX/SPX Setup—select frame type(s) **Service Setup** PServer Setup and NDS Setup Select Root Browse to select PS Specify PQ search root (optional) Set Polling Interval	Install user software For printing: Connect client to PQ(s) that you set up on the NetWare FS (associated with the PS selected in NDS Setup) For running utilities: Configure one utility or use WebTools

Configuring a bindery connection

On Bindery FS	On DocuColor Control Panel	On client workstation
In PCONSOLE: Select NetWare FS (up to 8) For each FS: Configure PS Configure PQ Configure users of the PQ	**Port Setup** Ethernet Setup and/or Token Ring Setup **Protocol Setup** IPX/SPX Setup—select frame type(s) **Service Setup** PServer Setup and Bindery Setup Add FS (up to 8) Set Polling Interval	Install user software For printing: Connect client to PQ(s) that you set up on the NetWare FS (associated with the PS selected in Bindery Setup) For running utilities: Configure one utility or use WebTools

Setting up an NDS connection

In NDS, all NetWare entities (objects) are organized in a hierarchical tree structure. Objects have a name, properties, and a context which defines the location of the object in the directory tree. For the DocuColor you are mainly concerned with defining a printer, a print server object and one or more print queue objects. Objects are created in NetWare administrator programs (PCONSOLE or NETADMIN which are text-based, or NetWare Administrator which has a graphical user interface and context-sensitive help).

NOTE: "NDS" is used interchangeably as an abbreviation for either Novell Directory Services or NetWare Directory Services. There is no difference between the two.

The top-level tree object is known as the [Root] object. The name of the [Root] object is also the name of the tree. Below the [Root] are other objects: either containers (which consist of other objects) or leaf objects (which do not contain other objects). Access to objects is controlled by rights that are defined as properties of each object. Rights are established by network administrators.

NOTE: The procedures that follow work with all versions of NetWare 4.x. With NetWare 4.11 or later, you can combine the procedures using the Print Services Quick Setup dialog box.

TO CREATE AN NDS PRINT QUEUE:

1. **Start NetWare Administrator and select the container in which you are going to define the print queue for the DocuColor.**
2. **Choose Create from the Object menu.**
3. **In the New Object dialog box, select Print Queue.**
4. **In the Create Print Queue dialog box, select Directory Service Queue.**
5. **Enter a name for the print queue with the queue extension: DocuColor_print, for example.**

   See page 3-3 for queue naming conventions.

6. **Click the browser button to select a print queue volume.**

7. **In the Select Object dialog box, double-click a container object in the Directory Context list and browse until the volume you want appears in the Objects list.**

   This volume holds the actual files while they are queued for printing, so make sure it has enough disk space.

8. **Select the volume in the Objects list, and choose OK.**

9. **In the Create Print Queue dialog box, click Create.**

10. **Click Details for Print Queue.**

11. **Enable guest access and/or create users.**

    You must enable at least guest access for the queue to be usable. You can also create registered users.

TO CREATE AN NDS PRINTER AND ASSIGN A QUEUE TO THE PRINTER:

1. **Start NetWare Administrator and select the container in which you are going to define the NDS printer for the DocuColor.**

2. **Choose Create from the Object menu.**

3. **In the New Object dialog box, select Printer.**

4. **Enter a name for the printer.**

   You can define additional properties for the printer at this point.

5. **Click Create.**

6. **In Printer Details, click Assignments. Click Add.**

7. **In the Select Object dialog box, browse the containers until the queue you want is listed in the Objects list.**

8. **Select the print queue you created for the DocuColor and choose OK.**

9. **From the Printer dialog box, select Configuration and select Other/Unknown as the Printer Type and, depending on personality choice, select PostScript as the Banner Type.**

TO CREATE AN NDS PRINT SERVER AND ASSIGN A PRINTER:

1. **Start NetWare Administrator and select the container in which you are going to define the NDS print server for the DocuColor.**
2. **Choose Create from the Object menu.**
3. **In the New Object dialog box, select Print Server.**
4. **Enter a name for the print server.**
5. **Select Define Additional Properties.**
6. **Click Create.**
7. **In the Print Server dialog box, click Assignments.**
8. **Select Add and select the printer (object) you want to assign to the print server.**
9. **In the Select Object dialog box, browse the Directory Context list until the printer you want is listed under Objects.**
10. **Select the printer and click OK.**

The remaining setup is performed on the DocuColor. An outline follows; for more detailed information, see page 2-9.

COMPLETING THE SETUP ON THE DOCUCOLOR:

1. **With the DocuColor connected to the Novell network, restart the DocuColor to perform Setup.**

   For access to Setup, see page 2-3.

2. **In the Network Setup, choose Port Setup and enable the port you will use for printing to the DocuColor.**

   This can be Ethernet, Token Ring (if you have installed the Token Ring option), or both.

3. **Choose Protocol Setup and configure the protocols you will use. Choose IPX/SPX Setup to select the frame type(s) that will be used between the NetWare server(s) and the DocuColor.**

4. **Choose Service Setup, choose PServer Setup, and choose NDS Setup.**
5. **Identify the NDS tree on which the printer, print server, and print queue have been defined.**
6. **Select the user login object.**
7. **Identify the defined print server.**
8. **Finally, to restrict the search for the print queues you've defined, browse to a container object that contains the print queue or queues.**

Setting the NetWare 4.x bindery context

You can connect only one directory tree to the DocuColor. If you need to connect additional NetWare 4.x servers, you can do so by using bindery emulation, which causes the 4.x server to behave like and be accepted as a NetWare 3.12 server.

NOTE: The file server selected must not be in the same tree as that selected in NDS Setup.

Up to eight bindery servers, whether in native 3.12 mode or in 4.x emulation, can connect to the DocuColor.

If your server is using NetWare 3.12, proceed to "Setting up a DocuColor print queue for bindery" on page 3-12.

In order to set up the NetWare 4.x server in bindery emulation mode for printing to the DocuColor, the network administrator must do the following:

- Determine the Directory Services path to the container in which the print server and the print queue for the DocuColor will be created.

  The container defines the "bindery context" for your network structure.
- Edit the network startup file to set the bindery context
- Activate the new bindery context

This section describes the second and third steps. Given the variety of possible network structures, it is impractical to suggest a bindery context that applies to every network.

TO SET THE BINDERY CONTEXT:

1. **Establish a connection with the server which will have the DocuColor queue.**

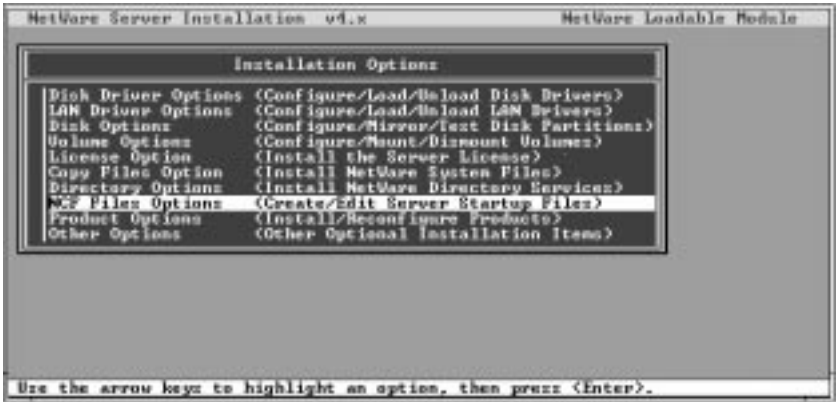
   This is best done by the network administrator using PSERVER from the server console. It can also be done remotely using the RCONSOLE utility.

2. **At the NetWare prompt type** load install**.**

   The NetWare Server Installation window is displayed.

3. **Use the down arrow key to select Maintenance/Selective Install.**

   The Installations Options menu is displayed.



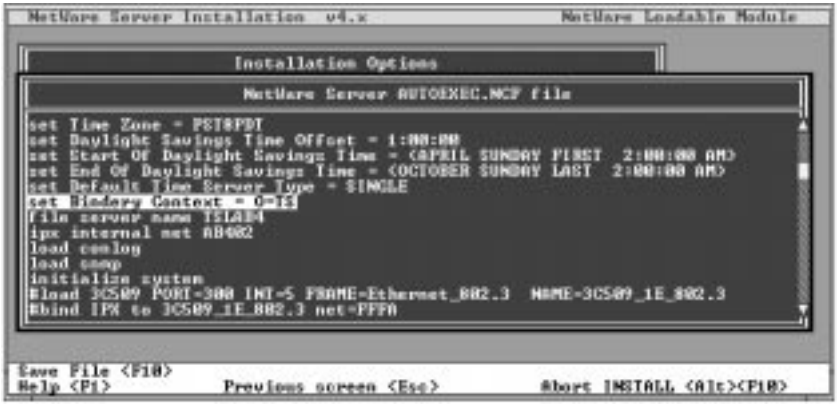
4. **Select NCF Files Options.**

5. **On the menu of available NCF files, select Edit AUTOEXEC.NCF file.**

6. **Type a new line anywhere in the file as follows:**

   set Bindery Context = O=xx

   NOTE: Instead of xx, type the bindery context obtained from the system administrator. (In this example from a relatively simple directory structure, the Bindery Context is "TS".) Also note that O in this line is the letter O, not the digit zero.



7. **Press Esc to close the window, and save changes.**

8. **Proceed to the next section to activate the bindery context.**

TO ACTIVATE THE BINDERY CONTEXT:

1. **If you cannot reboot the NetWare server at this point, type the** set **command manually at the server's colon prompt.**

   Use the same command as you entered in the AUTOEXEC.NCF file (in step 6 of the previous procedure).

2. **If you can reboot the NetWare server, the** set **command is loaded automatically.**

   You are ready to set up the DocuColor print server and print queue. See the next section for details.

Setting up a DocuColor print queue for bindery

For NetWare 3.12 and for 4.x in emulation, the NetWare print server and print queue for DocuColor are created and configured from NetWare Print Console (PCONSOLE), a NetWare utility that is stored in NetWare's PUBLIC directory.

As with NDS, first you create several NetWare entities on a Novell server, then you select them in Network Setup on the DocuColor Control Panel.

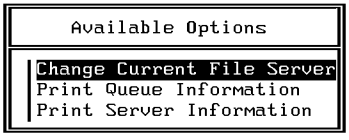
TO SET UP A NETWARE SERVER FOR PRINTING TO THE DOCUCOLOR:

1. **Log in to the NetWare server as the Supervisor.**

2. **At the NetWare MS-DOS prompt, type** pconsole**.**

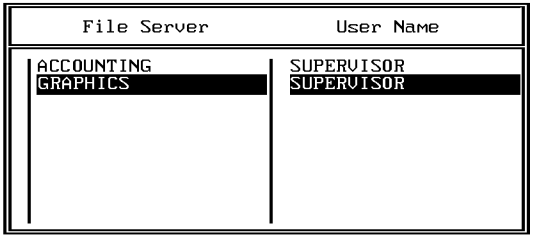
   If you are using NetWare 4.x in bindery mode, Print Console (PCONSOLE) has two modes. Press the F4 key to switch to Bindery mode.

   The Available Options menu is displayed.



3. **Choose Change Current File Server and press Enter.**

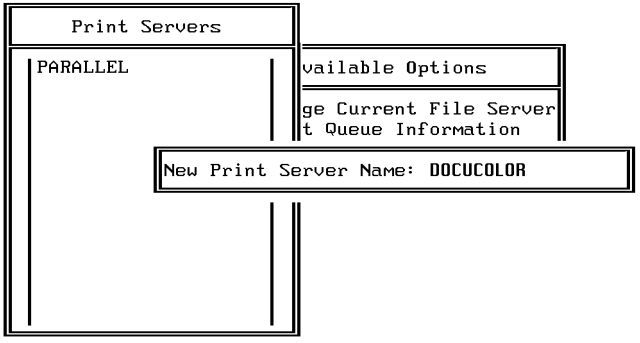
4. **Using the arrow keys, select the name of the file server you'll use for sharing DocuColor printing and press Enter.**



This is the file server you select later in DocuColor Network/PServer/Bindery Setup.

5. **Choose Print Server Information from the Available Options menu.**

6. **Press the Insert key, type a name for the new print server, and press Enter. Then press Esc.**

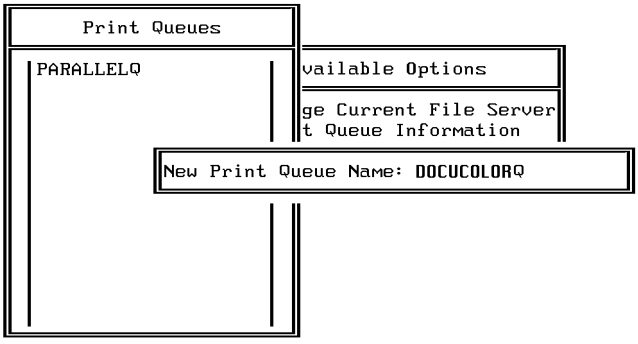


You must select the same print server here and in DocuColor Network/PServer/Bindery Setup.

7. **Choose Print Queue Information from the Available Options menu.**

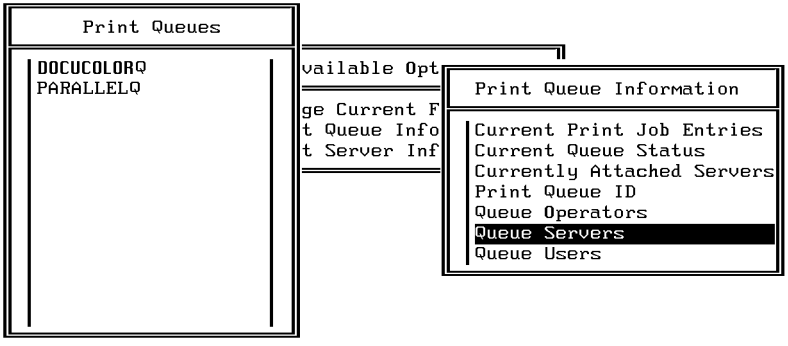
8. **Press the Insert key and type a name for a new DocuColor print queue. Press Enter.**

   See page 3-3 for queue naming conventions.



9. **Make sure the print queue name you created is selected in the list of Print Queues, and press Enter.**

   The Print Queue Information menu is displayed.

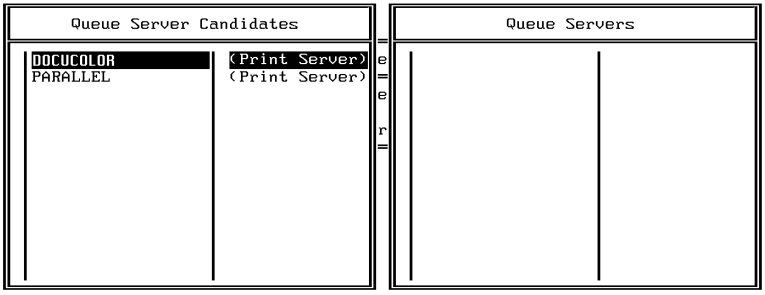


10. **In the Print Queue Information menu, choose Queue Servers, and press Enter.**

    A blank Queue Servers list is displayed.

11. Press the Insert key.

The Queue Server Candidates list is displayed.



12. Use the arrow keys to select the name of the print server you created in step 6 and press Enter.

The server name you select will appear in the Queue Servers list.

You have associated the selected DocuColor queue with the print server you created in step 6.

NOTE: The DocuColor obtains jobs from all queues defined for a print server, and all jobs from one file server go to the same queue on the DocuColor.

13. If you wish to set up a print queue on another file server, press Esc to close the windows until only the Available Options menu is displayed. Repeat the steps beginning with step 3.

The DocuColor can support up to eight file servers on Ethernet, and eight on Token Ring.

14. If you have configured all the servers you need, press Esc to exit all Print Console windows.

15. Choose Yes or press Return to save changes to Print Console.

Setting up NetWare Windows clients for printing

Before setting up client workstations for printing, make sure you perform Network Setup on the DocuColor Control Panel (see page 2-9), and that the settings reflect the entities you created in the NetWare administrator utilities (see page 3-4).

NOTE: For printing to the DocuColor, connect all Windows clients to a Novell NetWare server and permit them to connect to the server or servers on which you defined a DocuColor queue.

After the Novell server and the DocuColor have been set up, client setup consists of:

- Installing the networking protocol, binding it to the network adapter card, and permitting the client to log in to the NetWare file server.

  On Windows 95 Workstations, both the IPX/SPX-compatible protocol and the Client for NetWare Networks should be loaded from the Network Control Panel. On Windows 3.1x workstations, the NetWare shell should be installed. On Windows NT workstations, Client Service for NetWare should be installed. Use the CSNW option in Control Panel to set printing options and specify a preferred NetWare server.

- Setting up the DocuColor as a PostScript printer by installing a PostScript printer driver and the DocuColor PPD (PostScript printer description).

- Adding a network port and connecting the workstation to one or more NetWare queues that have been defined for the DocuColor.

  See *Getting Started* for details on how to connect Windows 3.1x, Windows 95 and Windows NT workstations.

- Installing other optional client software.

  See *Getting Started* for details.

Configuring Windows 95 workstations for remote utilities

To run the remote utilities, a Windows 95 workstation on an IPX network must have IPX/SPX protocols loaded and bound to the network driver. There should be a NetWare server on the network.

Before you begin, for Windows 95, install the IPX/SPX-compatible protocol and Microsoft TCP/IP. After you have installed one or more utilities, you may uninstall Microsoft TCP/IP.

The steps below summarize installing the utilities on a single workstation. The installation is described in the *Getting Started* in greater detail.

TO INSTALL THE UTILITIES:

1. **Configure your NetWare server and perform DocuColor Setup.**
2. **In DocuColor Setup, perform Network Setup as summarized in the tables on** page **3-5. Under Ethernet Setup, perform IPX/SPX Setup.**
3. **Save changes after Setup.**
4. **Insert the DocuColor User Software CD in the client workstation and follow the instructions for installing utilities found in the *Getting Started*.**
5. **When the Installer prompts you to select a network protocol, select IPX/SPX.**

   This choice installs the applications in a folder of your choice and installs a NET_WIPX.DLL file into the active System folder.

   NET_WIPX.DLL is the NetLayer dictionary that the utilities need in order to run with IPX on Windows 95. You don't change this file.
6. **When you are prompted to find the NET_WSCK.INI file, click Next.**

   The Installer copies a blank configuration file to the Windows directory. The first time the client runs one of the utilities this file is automatically configured (see *Getting Started*).
7. **Before running a utility, print a Configuration page.**

   From the Functions menu on the DocuColor Control Panel, choose Print Pages and choose Configuration.
8. **Find the IPX Ethernet or IPX Token Ring address and record the address exactly.**

   You will enter this address when you run a utility for the first time (see *Getting Started*).
9. **Start the utility and configure the connection as described in *Getting Started.***

DocuColor on a TCP/IP network with Windows NT

When a Windows NT computer is configured to connect to the DocuColor using TCP/IP, it can print directly to the DocuColor. If the computer shares the printer over the network, it is acting as a print server to Windows NT and Windows 95 clients. The client machines print to the DocuColor by printing to the Windows NT print server. Printing can then be monitored and controlled at the Windows NT server machine.

Typical system combinations are:

- Print server running Windows NT Server; clients running Windows NT Workstation and Windows 95
- Print server running Windows NT Workstation and clients running Windows 95

With TCP/IP protocols loaded, you can also run the remote utilities from a Windows NT Server or Windows NT Workstation computer. Windows 95 clients can also run the WebTools over TCP/IP.

If there are many Mac OS computers or other PostScript printers at the site, the Windows NT server can also use AppleTalk protocols for printing to the DocuColor. You can load AppleTalk on the Windows NT server as an alternative to TCP/IP (see page 3-27).

Tips for experts—Windows NT with TCP/IP

Setting up printing from Windows NT using TCP/IP protocols is similar in some respects to setting up UNIX workstations with TCP/IP. When TCP/IP network connections are made from Windows NT workstations, note the following:

- **Make sure you have a valid IP address for the DocuColor and for any workstations that will print to it or run the remote utilities.**
- **In DocuColor Network Setup>Protocol Setup>TCP/IP Setup>Ethernet Setup (or Token Ring Setup), enable TCP/IP and enter the IP address for the DocuColor. Also enter the Subnet mask and Gateway address.**
- **Make sure your DocuColor name and address are listed in a domain name services (DNS) or a host name database used by your system.**
- **Make sure your system host table includes the correct internal name for the DocuColor as a remote printer. See page 3-30 for more information.**

- **For Windows NT 3.51, load the Windows NT PostScript printer driver and install the DocuColor printer description provided with the user software, as described in the *Getting Started.***

  Repeat the installation for everyone who prints to the DocuColor.

- **For Windows 4.0, install the DocuColor PostScript printer description on the Windows NT server (see the *Getting Started).***

  The Windows NT PostScript printer driver is automatically installed with Windows NT 4.0. The DocuColor PostScript printer description is also provided on the User Software CD.

- **Repeat the installation for everyone who prints to the DocuColor.**

  Each server and workstation running the utilities with TCP/IP also needs the TCP/IP protocol and the utility software.

  The Installer installs a NET_WSCK.DLL file and a blank configuration (NET_WSCK.INI) file. Running a utility for the first time automatically configures the NET_WSCK.INI file.

Configuring a Windows NT server to support the DocuColor

To configure a Windows NT 4.0 or 3.51 server to communicate with the DocuColor, follow these general steps. More detail is provided in subsequent sections.

- Load the TCP/IP network protocol (see the next section).
- Enter the host name of the DocuColor in the host database used by your system (see page 3-21).
- On the DocuColor Control Panel, perform Server Setup (see page 2-7), Network Setup (page 2-9), Printer Setup (page 2-32), PS Setup (page 2-34), and Color Setup (page 2-36).
- On the Windows NT server, create a printer for each DocuColor queue, install the appropriate printer drivers (if necessary), and (optionally) share the printer on the network (see page 3-23).
- Enter the host name and internal name of the DocuColor in the printer connection. See page 3-30 for more information.

- If the Windows NT 4.0 server is also a workstation, install the remote utilities (see *Getting Started* and page 3-26).

Loading the TCP/IP network protocol

If the TCP/IP protocol has not yet been installed on the Windows NT server, use the procedure in this section.

For this installation, you will need:

- Your Windows NT installation disks
- The IP address of the Windows NT server
- The IP address of the DocuColor (see page 3-29)
- The internal name of the remote printer (see page 3-30)

TO ADD TCP/IP NETWORK SERVICES:

1. **Log in to the Windows NT server as Administrator.**
2. **In the Control Panel, double-click the Network icon.**

   The Network Settings dialog box appears.
3. **Click Add Software.**
4. **In the Add Network Software dialog box, select TCP/IP Protocols and Related Components, and click Continue.**
5. **In the Installation dialog box, be sure to check TCP/IP Network Printing Support.**

   This supplies the necessary lpd protocol. If the item is grayed, it is already installed on your system.
6. **Configure the Windows NT server with its own IP address, subnet mask, and default gateway.**

   For Windows NT configuration options you can use with various host name systems, see your online or printed Windows NT documentation.
7. **When you are finished configuring TCP/IP choose Close and restart your computer for the changes to take effect.**
8. **Add the DocuColor to the network (see the next section).**

Adding the DocuColor to the TCP/IP network

If your TCP/IP network consists of Windows NT servers and Windows NT clients, use the directions in this section. If the network also includes UNIX workstations, also check the directions on page 3-31.

TO ADD THE DOCUCOLOR TO A TCP/IP NETWORK WITH A WINDOWS NT SERVER:

1. **On the DocuColor Control Panel, perform Server Setup, Network Setup and Printer Setup to support TCP/IP printing.**

   Enter the options in Protocol Setup (IP address of the DocuColor, Subnet mask, and Gateway address). In Printer Setup, publish the Print queue.

2. **Register the IP address of the DocuColor in the host name database used by your system.**

   For installations that don't have a network administrator or a central host name database, add the DocuColor to the hosts file on the Windows NT server. Also add it to the hosts file on any workstations that have TCP/IP loaded and will use the remote utilities.

Adding a DocuColor entry to the Windows NT hosts file

The hosts file maps remote devices to IP addresses. Host names are used in TCP/IP environments to locate IP addresses. Users can then communicate with any device over TCP/IP by using the host name rather than having to remember its IP address.

A generic hosts file is added to the Windows directory when you install TCP/IP support.

NOTE: If there is no system-wide host name database, use the following procedure to create a local hosts file. If there is a system-wide host database, skip the following procedure.

TO ENTER THE HOST NAME OF THE DOCUCOLOR:

1. **On the Windows NT server and on each client computer, navigate to the hosts file that you use for your network or for your local computer.**

   The path to a local hosts file will resemble the following:

   c:\WINNT\System32\drivers\etc\hosts

2. **Open the hosts file with any ASCII text editor such as Notepad (Windows) or Edit (DOS).**

3. **Type an entry for the DocuColor (IP address and host name) similar to the other entries in this file.**

   The Windows NT hosts file provides compatibility with the UNIX hosts file. The hosts file is used as a local Domain Name Services (DNS) equivalent. It has the same format as the /etc/hosts file on UNIX servers. The form of the hosts entry is:

   IP Address<TAB>host name<TAB>#comments

   where <TAB> indicates that you press the Tab key.

   NOTE: Type the entry exactly as shown, without a space before the IP address. The host name should be the same name you gave to the DocuColor in the Server Setup on the Control Panel.

   A sample entry for the DocuColor as the remote computer/printer, in which we've defined the host name of the printer as colorsvr is:

   192.9.228.1<TAB>colorsvr<TAB>#DocuColor Color Server

   NOTE: If the DocuColor has already been defined in an /etc/hosts file or equivalent host name database on a UNIX workstation on your network, use the same host name here as you used for the name of the remote printer in the /etc/hosts file.

4. **Save the file as "hosts" and exit the application.**

Installing the DocuColor as a shared PostScript printer

The first step in creating a printer is installing the Windows NT PostScript printer driver and the DocuColor PPD (PostScript printer description), which gives your applications access to printer features.

The installation instructions in *Getting Started* can be used for every workstation that will print directly and independently to the DocuColor. However, if you are an administrator running Windows NT Server or Windows NT Workstation, you can also create a printer and share it with clients on the network. When a printer is shared, clients who are not able or are not given permission to establish an independent network connection to the DocuColor have to print through the server.

You can specify sharing of the printer during installation of the DocuColor printer files. If you have not yet installed the DocuColor printer files on the Windows NT print server computer, do so now following the instructions in the *Getting Started.* During installation, enter the information necessary to share the DocuColor.

If you have already installed the DocuColor printer files on the computer you are using as a Windows NT print server, use the following procedure to share the DocuColor.

TO MAKE THE DOCUCOLOR A SHARED POSTSCRIPT PRINTER ON A WINDOWS NT 4.0 COMPUTER:

1. **Click Start>Settings>Printers to open the Printers window.**
2. **Select the DocuColor.**
3. **Open the Properties dialog box (right-mouse click and choose Properties) and click the Sharing tab.**
4. **Select Shared and enter a share name for the DocuColor.**

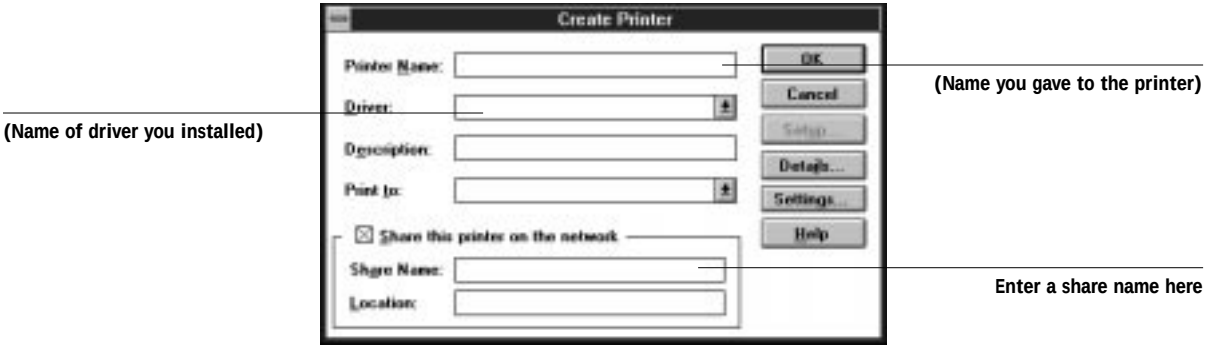
   Use a DOS-compliant share name if your network includes Windows for Workgroups clients. Use a name that indicates the DocuColor queue if you wish to publicize that information.
5. **In the Alternate Drivers window, select all operating systems used by client workstations from which the print server will accept print jobs.**
6. **Click OK.**

TO INSTALL THE DOCUCOLOR AS A SHARED PRINTER ON A WINDOWS NT 3.51 COMPUTER:

1. **On the Windows NT 3.51 print server computer, install the printer driver and printer file for Windows NT 3.51 clients as described in the *Getting Started.***

   If the client has never installed the Windows PostScript printer driver, you also need the Windows NT Installation CD to install the driver. If the PostScript printer driver is already present on the client computer, type the path to the driver when you are prompted to locate the driver.

2. **In the Create Printer dialog box, check Share this printer on the network.**



3. **Enter the share name of the printer.**

   By default, Windows NT creates a DOS-compliant share name. Use a DOS-compliant name if your network includes Windows for Workgroups clients. Use a name that indicates the DocuColor queue if you wish to publicize that information.

4. **Enter the location of the printer in the Location box (optional).**

5. **Follow the procedure to set up TCP/IP and lpd printing for Windows NT 3.51 Workstations, as described in the *Getting Started.***

   After you have finished configuring the printer, the DocuColor appears in its own Printer window in the Print Manager window. You can use the Print Manager window to track network print jobs. Print Manager only shows jobs from computers printing through the Windows NT print server. For a view of all DocuColor activity, use the Spooler or the WebSpooler.

Your Windows NT, Windows for Workgroups, and Windows 95 clients have access to the shared printer through their applications. They will not be able to change settings in the Printer Properties dialog box.

Configuring Windows NT clients

Each client of a Windows NT server is already using a network protocol to communicate with the server. Each client can print to the DocuColor if it has been shared by a Windows NT Server or Windows NT Workstation computer. In that case the client does not have to use the same network protocol to connect to the Windows NT server as the server uses to communicate with the DocuColor.

TO CONNECT AND PRINT TO THE DOCUCOLOR SHARED BY THE WINDOWS NT SERVER:

- **For Windows 95 clients, before printing, double-click the Windows NT server icon in the Network Neighborhood window, and double-click the printer name.**

  You will be prompted to set up the printer. When you choose to set it up, the Add Printer Wizard dialog box appears. Follow the steps in the *Getting Started*.

- **For Windows NT 3.51 Workstation clients, before printing, open the Print Manager. From the Printer menu, choose Connect To Printer. Select a printer from the Shared Printers list, or double-click a network, workgroup, or server icon to show additional printers.**

- **For Windows NT 4.0 Workstation clients, before printing, connect to the print server computer and select the DocuColor. Right mouse click and choose the Open command. When prompted, click Yes to have Windows set up the printer.**

After clients have selected the printer, they can choose it from the Print Setup, Page Setup or Print dialog box of their application. Clients can change printing options for their own job, but printer properties are grayed and not available for changing. When a client chooses Print, the job is transmitted to the Windows NT print server, and from there to the selected queue on the DocuColor. The job is listed in the Print Manager on the client workstation, and the administrator can track it in the DocuColor window in the Print Manager on the Windows NT print server.

Configuring Windows NT workstations for remote utilities

To run the remote utilities on a TCP/IP network, the workstation must be running Windows NT Server or Windows NT Workstation, with Microsoft TCP/IP protocols loaded and bound to the network driver.

TO ENABLE THE UTILITIES ON THE DOCUCOLOR:

1. **Perform DocuColor Setup and enable TCP/IP.**

   In Network Setup, choose Protocol Setup and perform TCP/IP Setup and Ethernet Setup. (Perform Token Ring Setup if the Token Ring option is installed.) Enabling TCP/IP automatically enables the communication for utilities.

2. **Set a valid, unique IP Address for the DocuColor, and then set the subnet mask and a gateway address if necessary.**

   Before you exit Network Setup, you can also choose Service Setup and enable Web Services (see page 3-28).

3. **Save changes after Setup.**

   Performing these steps once enables the utilities connection for all users on the TCP/IP network.

TO SET UP UTILITIES ON ANY WORKSTATION:

1. **Insert the DocuColor User Software CD in the Windows NT workstation and follow the instructions for installing utilities in *Getting Started*.**

2. **When the Installer prompts you to select a network protocol, select TCP/IP.**

   This choice installs the applications in a folder of your choice, and automatically places the NET_WSCK.DLL file into the active System folder.

   NET_WSCK.DLL is the NetLayer dictionary that the utilities need in order to run with TCP/IP on Windows NT. You don't change this file.

3. **When you are prompted to find the NET_WSCK.INI file, click Next.**

   The Installer copies the unconfigured file to your Windows directory. The first time the client runs one of the utilities, this file is automatically configured.

Using AppleTalk with NetWare servers

Users can print to the DocuColor from Mac OS computers via a NetWare print server. The AppleTalk protocol must be loaded on the NetWare server before you can set up the server to accept jobs from Mac OS clients. Then use the ATPSCON (AppleTalk Print Services) utility to configure a NetWare spooler for AppleTalk. The important settings for the spooler configuration are listed below.

- NetWare Print Queue should be set to a DocuColor print connection.
- Printer Model should be set to Generic PostScript.
- Spooler's AppleTalk Name should include DocuColor and possibly the name of the print connection (Print or Direct). This name appears in the Mac OS Chooser.
- Spooler's AppleTalk Type can be set to any setting. This setting has no effect.
- Spooler's AppleTalk Zone should be set to the appropriate zone.
- Banner Page with Jobs should be set to No.
- Advanced PostScript Options > Accept Binary Data should be set to Yes.
- Advertise Color Device should be set to Yes.

After the NetWare spooler has been configured, set up Mac OS client computers for printing to the DocuColor as described in *Getting Started*.

Using AppleTalk with Windows NT

Windows NT servers can also use AppleTalk for printing with the DocuColor.

The important thing to note, in creating a printer that you are sharing with AppleTalk users, is NOT to "capture" the printer. Capturing the printer forces all users to print to the server rather than directly to the printer. If you capture the printer, DocuColor queues will not appear in the Mac OS Chooser.

Loading the AppleTalk protocol on a Windows NT server is very similar to loading TCP/IP. If you are only using AppleTalk, you do not need an IP address or a Windows NT hosts file entry for the DocuColor queue or queues.

Install the Windows NT PostScript Printer driver and the DocuColor PPD for your Windows NT server and for your Windows NT and Windows clients. Mac OS users can print directly to the DocuColor and should install the AdobePS printer driver for the Mac OS and the DocuColor PPD. All of these installations are described in *Getting Started*.

Configuring the DocuColor and clients for WebTools

The WebTools duplicate many of the functions of the utilities. Because they are accessed via the Internet (or your company's intranet) and are platform-independent, they provide additional flexibility in remote management.

TO SET UP WEBTOOLS ON THE DOCUCOLOR:

1. **Perform DocuColor Setup and enable TCP/IP.**

   In Network Setup, choose Protocol Setup and perform TCP/IP Setup and Ethernet Setup. (Perform Token Ring Setup if the Token Ring option is installed.) Enabling TCP/IP automatically enables the communication for the WebTools.

2. **Set a valid, unique IP Address for the DocuColor, and then set the subnet mask and a gateway address if necessary.**
3. **Exit TCP/IP Setup and exit Protocol Setup.**
4. **Choose Service Setup, and choose Web Services Setup.**
5. **For Enable Web Services, select Yes.**
6. **Exit Service Setup and exit Network Setup, and select Yes at the Save Changes screen.**
7. **In DocuColor Printer Setup, confirm that Publish Print Queue is set to Yes.**
8. **Exit Printer Setup, and select Yes at the Save Changes screen.**

TO SET UP WEBTOOLS ON A CLIENT WORKSTATION:

1. **Enable TCP/IP networking.**
2. **Make sure the workstation has a valid, unique IP address.**

3. **Make sure an Internet browser that supports the Java language and frames is installed.**

   Make sure Java is enabled in the Internet browser.

   See *Getting Started* for the list of browsers supported for the WebTools.

TO ACCESS THE WEBTOOLS FROM A CLIENT WORKSTATION:

You access the WebTools from the DocuColor home page, which you access from your Internet browser.

1. **Start the Internet browser.**
2. **Enter the IP address or DNS name of the DocuColor.**
3. **Press Enter or Return.**

   The DocuColor home page appears. The exact home page you see may vary. Follow the directions given on the home page to launch the WebTools or to find out more information about a particular WebTool.

DocuColor on a network with UNIX workstations

When a UNIX workstation is configured with the lpd protocol, and connected to the DocuColor over a TCP/IP network, it can print directly to the DocuColor.

Setting up UNIX workstations requires an administrator with root privileges. After the initial configuration, UNIX users simply submit print jobs to a named printer.

The remote utilities (Spooler and Downloader) are not currently available on the UNIX platform. However, a Windows NT Workstation or Windows NT Server computer set up to use TCP/IP for printing to the DocuColor can also use the Downloader to download files and fonts, and use the Spooler or WebSpooler to manage print jobs that originate from all workstations on the network. The basic procedures for setting up printing and installing remote utilities are given on page 3-26 and in *Getting Started*.

Tips for experts—UNIX workstations

Setting up the DocuColor in a UNIX environment has the same requirements as setting up any printer or new device:

- **A distinct IP address is needed for the DocuColor as well as for each workstation on the network.**
- **You select a DocuColor name that goes with the IP address.**
- **The IP address must be registered for the network in a host database, and also on the DocuColor itself.**
- **The Print queue must be published in Printer Setup.**

  Lpd printing to the Direct connection is not supported.

The following information pertains especially to the DocuColor:

- **DocuColor is a printer controller that understands lpd protocols.**
- **DocuColor has an internal (machine) name you must determine before you can communicate with it successfully.**

  See the next section for details.

Important note about the remote printer name

Whichever UNIX system you use, the name used for remote printer (or rp in the /etc/printcap file) in configuring the DocuColor is:

```
print_5750
```

The remote printer or rp name is also used when setting up your Windows NT workstation or server to connect to the DocuColor over TCP/IP.

Enter the remote printer name when you set up your Windows NT printer, as the "Name of printer on that (lpd host) machine" in the Add lpd compatible printer dialog box (see *Getting Started).*

Setting up the DocuColor on TCP/IP networks

Every machine (host) on a TCP/IP network, including the DocuColor, must have a unique 32-bit internet address (IP address). If the network is being set up for the first time, it's a good idea to start out with addresses that can be used with the public Internet. Contact your Internet service provider to obtain an address for the DocuColor.

Workstations on a TCP/IP network can print directly to the DocuColor as a remote printer, or can print to a Windows NT Server or a UNIX workstation acting as a print server. Since the DocuColor spools jobs and acts as a print server, there is no advantage in placing another print server between a workstation and the DocuColor. If you choose to do so, however, there is no difference in setup except that a client machine does not have its own spooling area.

TO SET UP DOCUCOLOR PRINTING ON UNIX SYSTEMS:

1. **Specify the appropriate settings in the DocuColor Server Setup.**

   To access DocuColor Setup, see page 2-2.

2. **Specify the appropriate settings in the DocuColor Network Setup.**

   Run the setups listed in the table on page 2-9 and enter a valid IP address, subnet mask and gateway address for the DocuColor.

3. **Specify the appropriate settings in the DocuColor Printer Setup.**

   Publish the Print queue.

TO SET UP TCP/IP FOR COMMUNICATION WITH THE DOCUCOLOR:

1. **A superuser (with root login) must add the DocuColor to the network's IP host table or other system database of network printers.**

2. **In the file or utility used by your network, specify the remote printer name, the print server protocol, the queue, and the spool file for the DocuColor name you assigned.**

3. **Make the DocuColor available as a printer to other network users.**

4. **To verify the TCP/IP connection, ping the IP address or the host name. From any computer on the network, at the command prompt, type:**

   ping <IP address>

   Type the DocuColor IP address assigned in DocuColor Network Setup.

   After the DocuColor is set up as a network printer, you can also ping the name you gave to the DocuColor

   ping <hostname>

   The server should respond with a message such as

   <IP address> is alive

   Some systems will respond with a continuous display of output from the IP address. To stop the output, type Control-C. You can use the ping command at any time.

Printing and managing print jobs

UNIX printing commands and options are detailed in the manual pages for your system. Some examples are given in the DocuColor *User Guide*.

TO PRINT TO THE DOCUCOLOR:

- **On a UNIX system running SunOS 4 or other BSD-based variant, use the lpr command to send a job to the DocuColor.**
- **On a UNIX system running Solaris 2 or any System V implementation of UNIX, use the lp command to send a job to the DocuColor.**
- **Windows NT users with the TCP/IP protocol loaded can send print jobs to a DocuColor from their applications or from a command prompt.**

  Printing from applications uses the Windows NT PostScript driver. This gives Windows NT users a larger selection of print options than printing from the command line.

Managing print jobs

UNIX network administrators can use UNIX utilities for viewing the list of jobs, and for printing and removing jobs that are spooled on UNIX servers. If the network includes a Windows NT workstation that has TCP/IP protocols loaded, you can use the Downloader to download files and manage fonts on the DocuColor. You can also use the Spooler to:

- See DocuColor status
- See, print, export, and clear the DocuColor Job Log
- View and manage print jobs in the DocuColor Print queue
- Print or clear jobs in the Printed queue

The utilities are particularly useful if the network is running several protocols simultaneously, or if DocuColor jobs are being spooled to several UNIX workstations. The utilities are described in detail in the *User Guide*.

TO USE UTILITIES:

- **Load the utilities on a Windows NT server or workstation. Open the Spooler to view current job activity and manage DocuColor print jobs that have been printed to a queue.**

  See *Getting Started* for installing the Spooler, and the *User Guide* for details of using it.

TO USE THE WEBSPOOLER:

1. **If you wish to protect print jobs from manipulation by WebSpooler users, specify an administrator password on the DocuColor Control Panel, as described on** page **2-42.**
2. **From a web browser on a workstation on the same network as the DocuColor, enter the DocuColor URL (Universal Resource Locator—the standard Web address) to access the DocuColor home page.**
3. **Click WebSpooler.**
4. **Choose Password from the Administrator menu, and enter the password.**

   All spooled, printed, and currently processing and printing jobs are visible. You can perform the same administrative functions as you can with the Spooler.

   Even without the remote utilities, you can:

   - Save a record of individual jobs by using the Print Cover Page option in DocuColor Printer Setup (see page 2-34)
   - Set up the DocuColor to print a log of printed jobs automatically after every 55 jobs (see Job Log Setup on page 2-38)
   - Print a Job Log manually at any time from the Functions menu on the DocuColor Control Panel (see the *User Guide*).

Chapter 4: Administering the DocuColor

This chapter gives tips on managing DocuColor printing, and includes some troubleshooting hints.

Administrator functions

Administration features are provided in the user software package and are built into the color server itself. The following table tells you where to find information on these features. Page references are in this manual.

For these operations:	And these tasks:	See:
Setting up network servers	Setting up servers to manage and share printing services	This manual
Connecting and setting up the DocuColor	Connecting the DocuColor and performing DocuColor Control Panel Setup Setting up the DocuColor to allow user access to WebTools	This manual *This manual and Release Notes*
Setting up the printing environment	Setting printer defaults. Setting print model-specific options	Printer Setup, 2-32 PS Setup, 2-34 Color Setup, 2-36 *User Guide*
Setting up the job environment	Publishing the Direct connection and Print queue to end users on various platforms	Printer Setup, 2-32, Chapter 3
Protecting integrity of users' jobs, maintaining consistency of color server settings	Setting the administrator password	Change Password, 2-42
Setting up all new users	Setting up printing, including installing PostScript printer drivers and PPD files for the printer Installing optional user software: remote utilities Preparing users to access WebTools	*Getting Started* *Release Notes*
Getting users started with printing and utilities	Printing to the DocuColor Setting job-specific options Running utilities: Spooler, Downloader	*User Guide*

For these operations:	And these tasks:	See:
Controlling the job flow	Using utilities or WebTools for managing job priorities, tracking current jobs, canceling jobs, reprinting from the Printed queue	*User Guide* *Release Notes*
Job accounting	Viewing, printing, and exporting the Job Log, user notes Setting automatic printing and clearing for the Job Log	*User Guide* See 2-38
Calibration and color management	Calibrating the DocuColor	*User Guide* and this manual, 2-39 Getting Started
Maintaining optimum DocuColor performance	Tips Deleting jobs, clearing queues	4-2, also *User Guide*
Troubleshooting	Troubleshooting DocuColor Setup Printing, printer, and user software troubleshooting	4-3, also *User Guide*

Maintaining optimal server performance

The DocuColor does not require maintenance. Beyond the obvious requirements of servicing and maintaining the copier and replenishing consumables there are a few things you can do that will improve the overall performance of your system:

- **Make sure you are making the best use of your network connections**

  Publish only connections that will be used; the DocuColor constantly checks all published connections, even if they are inactive. Match the NetWare polling interval and the number of queues or connections to the demand for printing.

  Review the published connections by printing a Configuration page. Eliminate the connections that are not being used. It is easy to re-establish them when needed. In general, network connections provide far superior throughput than a parallel port connection.

- **Reduce the number of printed pages by electing not to print a cover page by default unless you need cover pages for recordkeeping**

  Printing cover pages by default is a Printer Setup option.

- **Reduce unnecessary two-way communication**

  Remote users running Spooler or Downloader, especially with frequent updates, may have a significant effect on DocuColor performance.

- **Make sure you have adequate disk space on the color server**

  An administrator can print or delete jobs that are in the Printed queue. Consider printing or offloading inactive jobs. If disk space on the color server is frequently low, you can disable the Printed queue (in Server Setup).

  To move or remove queued jobs, use the Spooler or WebSpooler. When you free up disk space by removing inactive jobs, new jobs are spooled and printed more quickly.

  An internal hard drive upgrade may be available. Check with your service representative for more information.

Troubleshooting the DocuColor

Startup diagnostics are described in your service documentation. Contact your authorized service/support center if you see any startup error messages on the DocuColor Control Panel, or if the DocuColor does not reach Idle status.

Troubleshooting during Setup from the Control Panel

The following section explains some error and alert messages that you may see during DocuColor Setup that might not be self-explanatory.

Network Setup messages

After this Setup screen:	This message:	Means:
Protocol Setup or Service Setup (Network Setup)	You must first enable a network port.	At least one network port (Ethernet or Token Ring) Ethernet must be enabled in Port Setup before Protocol Setup or Service Setup.

After this Setup screen:	This message:	Means:
Frame Type selection (Network Protocol Setup/ IPX/SPX Setup)	Can't detect Token Ring hardware. Token Ring hardware not installed or not functioning.	DocuColor queries the Token Ring hardware. Error indicates that some components are not installed, are not installed correctly, or not installed in the correct device. An unsupported Token Ring board may be in use. Check with your authorized service/support center.
	Invalid frame size.	The network hub is not connected to a Novell machine when the DocuColor tries to bind.
	Warning! IPX network number is zero.	No other IPX machine can be found on the network, or the network hub is not connected to the network, when the DocuColor tries to bind. When this occurs, the network number defaults to zero.
Token Ring Setup	Can't autodetect the ring speed. No device on ring.	The DocuColor is trying to detect the current ring speed, but it is the only machine on the Token Ring network. Connect another machine to the Token Ring network first, before connecting the DocuColor.
Frame Type selection (Network Protocol Setup> IPX/SPX Setup)	Invalid frame size.	The network hub is not connected to a Novell machine when the DocuColor tries to bind.
	Warning! IPX network number is zero.	No other IPX machine can be found on the network, or the network hub is not connected to the network, when the DocuColor tries to bind. When this occurs, the network number defaults to zero.
Enable NDS (Network Service Setup>PServer Setup>NDS Setup)	No NDS trees found.	No NDS trees were found on the Novell network. Check that IPX frame types are properly set.

After this Setup screen:	This message:	Means:
Select NDS Tree (Network Service Setup/ PServer Setup/NDS Setup)	Warning! Selecting a new NDS tree deletes Bindery setup.	You have previously connected the DocuColor to a different NDS tree. NEST supports only a single NDS tree connection. To avoid a potential conflict with an existing tree connection (for example, if the connection was made through a NetWare 4.x server in emulation mode), all bindery settings will be deleted. If you choose OK, and choose Yes in the following message screen (Delete Bindery setup and continue?), bindery settings are deleted and have to be re-entered in Bindery Setup. To avoid deleting the bindery settings press the Menu key, or select OK and choose No in the following message screen (Delete Bindery setup and continue?). Repeat NDS Setup without changing the NDS tree, or exit to Bindery Setup to review your current bindery settings.
Navigating NDS tree (Network Service Setup/ PServer Setup/NDS Setup)	___ is empty.	The chosen container contains no sub-containers or objects relevant to the current mode of navigation.
Enter Password, Enter Print Server Password (Network Service Setup/ PServer Setup/NDS Setup)	Login to NDS tree (or Print Server) failed. Please try again.	The password you entered failed. Press the Menu button, check the password, return to the password entry screen and re-enter the password.
Bindery Setup (Network Service Setup/ PServer Setup/Bindery Setup)	If you also plan to use NDS, set up NDS before Bindery.	No NDS settings are present. You are reminded to perform NDS Setup before Bindery Setup in case your network includes both NDS and bindery servers.
Select File Server From List (Network Service Setup/ PServer Setup/Bindery Setup)	Error. Cannot open bindery connection to NDS server.	Select this server through NDS setup or disable NDS and select it through bindery.
Select File Server From List (Network Service Setup/ PServer Setup/Bindery Setup)	No NetWare file server found.	No file server was found when DocuColor queried the network to create a list of supported servers or a list of all servers. Check cable connections and make sure the NetWare server is turned on.

After this Setup screen:	This message:	Means:
Enter First Letters of Server Name (Network Service Setup/ PServer Setup/Bindery Setup)	File server name not found. Try again?	No file server with those letters was found when DocuColor queried the network. Check the name of the NetWare file server, check cable connections, and make sure the NetWare server is turned on.
View Server List, Edit Connection (Network Service Setup/ PServer Setup/Bindery Setup)	No file server is selected.	No file server has been added in Bindery Setup.
Add File Server (Network Service Setup/ PServer Setup/Bindery Setup)	All connections used. Remove server?	You have added the maximum number of bindery servers, which is eight.
Add Server, Enter Your Login Name, Enter Your File Server Password (Network Service Setup/ PServer Setup/Bindery Setup)	No NetWare print server found.	No print server was found when DocuColor queried the file server you selected. You must configure a print server and a print queue for every NetWare file server that will handle DocuColor print jobs (see page 3-4).
Any Bindery Setup screen	Novell error code, followed by a message.	Novell NetWare has reported an error. The Control Panel reports the error number and displays a brief explanatory message. For the most common errors (listed in the following table), a screen is displayed that enables you to retry the action that evoked the error, such as adding a server. If that is not possible, you are prompted to notify the Novell administrator, who will need to troubleshoot the network. Consult NetWare Administrator documentation for further explanation of Novell error codes.

In Network Setup, when you are configuring your IPX (Novell) connection, the DocuColor queries the network for Novell file servers and print servers, and attaches to them temporarily. If a guest login is enabled, it will be used. If not, you'll be prompted to log in from the DocuColor Control Panel.

If the selected NetWare file server does not have a guest account, or if the guest account has expired or has been disabled by the NetWare supervisor, you will be prompted to notify the IPX (Novell) administrator. In that case, you (or the supervisor) have two options:

- Enable a guest account on the NetWare server for the purpose of setup.
- Log in to a different account. At the ENTER LOGIN NAME screen, change the default name (guest) to supervisor or enter another valid login name. When you are prompted for a password, enter the correct password for the account you named.

For any Novell error, make sure:

- Your IPX (Novell) network is connected to the DocuColor.
- The NetWare server you are trying to access is running.
- The Novell network has been configured with at least one print server and queue for the DocuColor.
- You have the appropriate permissions.
- Each NetWare server is using one of the frame types you have set on the DocuColor in Network/IPX/SPX Setup.

Novell error screens

Novell error:	Cause:	Suggested action or exit:
220 Guest account not available	The guest account, which you have chosen for initial login, has expired or has been disabled by the NetWare supervisor.	Enable a guest account on the NetWare server for the purpose of setup. Alternatively, log in to a different account. In the ENTER LOGIN NAME screen, change the default name (guest) to supervisor or another valid login name. When you are prompted for a password, enter the correct password for the account you named.
222 Unable to log in to server. Password has expired for login name	The server has connected to a file server, but is unable to log in to the file server or print server because the password has expired for the login account name or the named print server.	Select a different login account or print server. The error screen exits to the File Server Login screen (if login to file server failed) or NetWare Print Server screen (if login to Print Server failed). Pressing the Menu button returns to the PServer Setup screen.
252 Unable to log in to server. Login does not exist	The server has connected to a file server, but is unable to log in to the server because the selected login account does not exist on the file server.	Select a different login account. The error screen exits to the File Server Login screen. Pressing the Menu button returns to the PServer Setup screen.
255 Unable to connect to file server. File server is down or out of connections.	The Novell file server is down or out of connections. This error occurs while the server is trying to connect to the requested file server.	Select a different file server (or try to get someone else to log off). Pressing the Menu button returns to the PServer Setup screen.

Novell error:	Cause:	Suggested action or exit:
nnn Notify IPX (Novell) Administrator.	Indicates other network errors when the color server is already connected to a file server. Something unexpected has happened and the user generally cannot recover without intervention of the network administrator. Error #197 indicates that you have exceeded the number of login attempts permitted for this account on the NetWare file server. Error #220 indicates that the guest account you selected is not available. Error #255 usually indicates a hard failure.	Notify the Novell administrator and report the error number. The error screen exits to the PServer Setup screen.

Runtime error messages

For canceling jobs, calibration alerts, and error messages related to printing and calibration, see the *User Guide*.

Check power and cable

This message on the Control Panel indicates that the interface cable between the DocuColor and the copier is not connected, or a print job is ready but the copier is not turned on. Depending on the copier or printer model, the runtime diagnostics Test Scan/Print, Video Diagnostics, and Cable Check may be available for service technicians.

See the *User Guide* for additional runtime error messages, including copier errors, alerts to load media in trays or cassettes, and a disk full message. These messages are reported by the Control Panel and the remote utilities.

PostScript error reporting can be turned on by setting the PS Setup option Print to PS error to Yes.

Printer not found—TCP/IP or IPX networks

Most failures to find a printer on the network are due to conflicting or missing name or address settings for the printer/server. You must enter particular names in certain places. The required names are:

- **TCP/IP host name** or **DNS name**, which is defined by the MIS group in your organization, and should be fewer than 10 characters long. In this manual we use colorsvr.

  Enter the host name as the Server Name on the DocuColor Control Panel.

- **Internal (machine) name** in the form:
  print_5750

NOTE: You must reconfigure one of the utilities on each workstation if you change the TCP/IP host name or DNS name of the DocuColor.

Check the table below for the appropriate name to use.

In this location:	For this item:	IPX/SPX networks:	TCP/IP networks:	See page:
Server Setup on DocuColor Control Panel	Server Name option	User-selected name	User-selected name	2-7
Windows NT hosts file	host name	—	DNS name or TCP/IP host name	3-21
Windows NT setup for TCP/IP	lpd host name	—	DNS name or TCP/IP host name	3-23, & *Getting Started*
	name of printer on lpd host machine	—	print_5750	
UNIX /etc/hosts file	rp line	—	print_5750	3-30, & *User Guide*
Solaris	lpadmin queuename	—	print_5750	
NetWare administration utility	print queues	print_5750	—	—
Add New Server dialog box, when configuring a utility	New Device	print_5750	print_5750	*Getting Started*
	Server Name	Server Name of DocuColor as specified in Setup	DNS name or TCP/IP host name	

In this location:	For this item:	IPX/SPX networks:	TCP/IP networks:	See page:
	Server Name	Server Name of DocuColor as specified in Setup	DNS name or TCP/IP host name	
	Server Name	Server Name of DocuColor as specified in Setup	DNS name or TCP/IP host name	

Printer not found in the Chooser of remote utilities

If you start one of the remote utilities and cannot connect to the DocuColor color server, check the following:

- DocuColor Setup—the appropriate network protocol must be enabled, with the correct parameters (for example, for TCP/IP, the IP address, etc.; for IPX, a correct frame type setting), and you must have published the Print queue.

  Verify that in IPX/SPX Setup the IPX network protocol has bound to all the frame types in use by the NetWare servers that handle DocuColor print jobs.

  You can check these settings quickly by printing a Configuration page.

- On your workstation—you must have the appropriate network protocol(s) loaded, your Windows directory should contain your edited NET_WSCK.INI file, and your System folder should contain *only one* of the following files:

  NET_WIPX.DLL if the workstation is running IPX/SPX protocols, or
  NET_WSCK.DLL if the workstation is running TCP/IP protocols.

Appendix A: Token Ring Network Option

Token Ring is an alternative network architecture to Ethernet architecture. Token Ring networks offer a high resistance to failure and are commonly used in large or high-traffic network installations.

Token Ring networks operate by passing a network token around the electronic equivalent of a ring. The token is a data packet that circulates from one network node to another, controlling access to the network. In practice, each workstation is connected to a port on one or more media attachment units (MAUs) which act as network hubs for the ring connection.

This Appendix describes the Token Ring option and Token Ring cable connections, and refers you to the remaining configuration that's required for printing to the DocuColor.

DocuColor Token Ring option

DocuColor supports Token Ring networks that use IPX and TCP/IP protocols. To use the DocuColor with a Token Ring network, the Token Ring option must be installed. This option consists of an enabler board and an Intel Token Ring network interface card installed in the DocuColor chassis. DocuColor System software that supports the Token Ring option is standard.

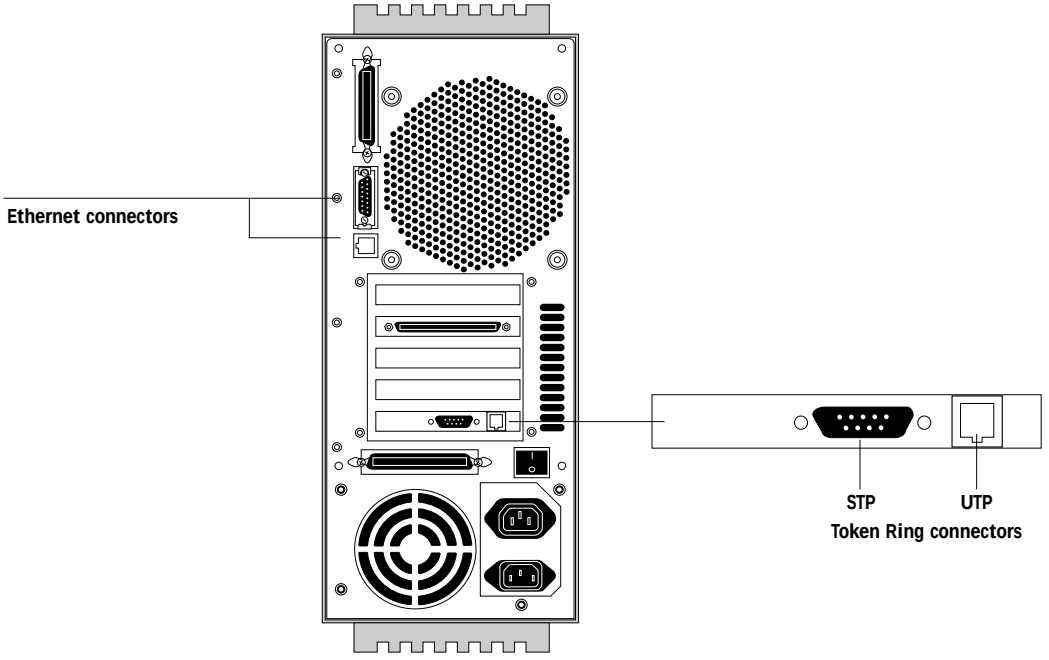
NetWare file servers or other workstations may be directly connected to the DocuColor or connected through a router. If they are directly connected, they must also use a Token Ring adapter and Token Ring cabling. Client computers may be connected to the NetWare file server with Token Ring or Ethernet cabling.

Connecting Token Ring hardware

The service/support center that installs the DocuColor usually installs the Token Ring option at the same time, and configures the DocuColor to enable printing.

The DocuColor Token Ring option uses the Intel TokenExpress™ PRO LAN Adapter board. Software drivers for the board are included in the DocuColor system software.

Back view of the DocuColor with the Token Ring option installed



Shut off the DocuColor before connecting it to any network device.

NOTE: Do not attach cable to both Token Ring connectors.

TO CONNECT UTP (UNSHIELDED TWISTED PAIR) CABLE TO THE DOCUCOLOR:

- **With the DocuColor turned off, connect RJ-45 cable from the Token Ring MAU to the RJ-45 socket on the Token Ring card.**

  Configure the NetWare, Windows NT, or UNIX server to print to the DocuColor (see the next two sections) Then proceed to page 2-2 for DocuColor Setup.

TO CONNECT STP (SHIELDED TWISTED PAIR) CABLE TO THE DOCUCOLOR:

- **With the DocuColor turned off, connect STP cable from the Token Ring MAU to the DB-9 STP connector on the Token Ring card.**

  Configure the NetWare, Windows NT, or UNIX server to print to the DocuColor (see the next two sections). Then, proceed to page 2-2 for DocuColor Setup.

IPX/SPX installations

If your network uses IPX/SPX protocols with Token Ring, configure at least one printer, a DocuColor Print Server and a DocuColor Print Queue on the NetWare server as described in “Configuring a NetWare server for printing” on page 3-4. You can configure up to eight bindery servers and one NDS tree connection to the DocuColor. This total is the same whether the DocuColor is connected by Token Ring, by Ethernet, or by both. For more information, see “Setting up an NDS connection” on page 3-6.

TCP/IP installations

If your network uses TCP/IP protocols with Token Ring, configure a printer and a DocuColor queue on a Windows NT server (see “Configuring a Windows NT server to support the DocuColor” on page 3-19), or on a UNIX server (see “Setting up the DocuColor on TCP/IP networks” on page 3-31).

Setting up Token Ring on the DocuColor

Token Ring Setup on the Control Panel is similar to Ethernet Setup. From Network Setup, perform Port Setup, Protocol Setup, and Service Setup. The setups you need are summarized in the table on page 2-9.

NOTE: Connect the Token Ring cable before doing DocuColor Network Setup, so that the Token Ring card can configure itself for the correct cable.

Setting up NetWare Windows clients

Client setup is exactly the same as for IPX clients using Ethernet. See “Setting up NetWare Windows clients for printing” on page 3-15 for details.

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